

Prof. Dr. Omar Hasan Kasule, Sr.

Medical Education

An Islamic Perspective



Bangladesh Institute of Islamic Thought (BIIT)

Professor Dr. Omar Hasan Kasule, Sr.

Medical Education

An Islamic Perspective



Bangladesh Institute of Islamic Thought

Medical Education : An Islamic Perspective

Professor Dr. Omar Hasan Kasule Sr.

Publisher

Bangladesh Institute of Islamic Thought (BIIT)
House # 04, Road # 02, Sector # 09, Uttara Model Town, Dhaka – 1230
Phone/Fex : 8950227, 8924256, 06662684755
E-mail : biit_org@yahoo.com Web: iiitbd.org

1st Published

October 2007
Kartik 1414

2nd Edition

August 2009
Bhadra 1416

ISBN

984-70103-0000-0

Price

Tk. 200.00 US \$ 20.00

Medical Education : An Islamic Perspective *Written by Professor Dr. Omar Hasan Kasule Sr. and Published by Bangladesh Institute of Islamic Thought (BIIT) Phone/Fex : 8950227, 8924256, 06662684755 E-mail : biit_org@yahoo.com Web: iiitbd.org Price : Tk. 200.00 US \$ 20.00*

Publisher's note

Medical Ethics is an important phenomena in modern day science. All sciences are devoted to the well-being of the humanity where Medical science is a special one. Without ethics Medical Science can not perform its duty in its complete sense to the human-being. It is a simple but significant attempt that BIIT undertook to publish a book entitled 'Medical Education : An Islamic Perspective' by Prof. Dr. Omar Hasan Kasule Sr. For a long time we have been expecting to publish a book on Medical Science. We are very much thankful to Prof. Kasule for creating a scope to publish such a kind of book.

Dr. Kasule is a professor of Epidemiology and Islamic Medicine at University of Brunei Darussalam and visiting Professor of Epidemiology at University of Malaya. He has written a good number of articles on Medical science. During his visit to Bangladesh in the month of March and August in 2007, he presented several articles in the workshop with Medical Professionals. Here we compiled his eighteen articles only. Bangladesh Institute of Islamic Thought decided to publish the compilation in a book form entitled 'Medical Education : An Islamic Perspective'. This is the second edition of the book, since all the copies of first edition are almost exhausted because of extensive demand.

We believe that this book will immensely benefit the concerned practioners of Medical science as well as interested readers. We hope that it will cater to the long-felt needs of the researchers, teachers, students and intellectuals. We also hope that this book will be very useful particularly for Medical Professionals as a reference book.

Dr. Md. Lutfur Rahman
Executive Director

Contents

<i>Khalq</i> (Creation)	5
Life, Health and Growth	25
<i>Jism al Insaan</i> (The Human Organism: Structure and Function)	49
<i>Fiqh al 'Aadaat</i> (Activities of Normal Living)	68
<i>Fiqh al Amraadh</i> (Disease Conditions)	88
<i>Fiqh al Mustajiddaat</i> (Modern Medicine)	108
Akhlaq al Tibb (Medical Ethics)	124
<i>Takwiin at Tabiib</i> (Formation of the Physician)	154
<i>Fiqh al Ibadat</i> (Physical Acts of Worship)	169
<i>Fiqh al Mu'amalaat</i> (Transactions)	190
<i>Fiqh al Jamaat</i> (The Community)	223
' <i>Aqiidat</i> (The Creed)	263
<i>Qiyadat</i> (Leadership)	277
Contemporary-Ethico-Legal issues from an Islamic Legal Perspective	287
The Approach of the Qur'an and Sunnah in Medicine: Challenges and Practices in the Era of Globalization	313
' <i>Ilm</i> (Knowledge)	328
Islamization of knowledge: Medicine as a Model	341
Islamization of the Curriculum: The Islamic Input in the Medical Curriculum (IIMC) at the Kulliyah of Medicine	360

Creation *Khalq*

Creation Of The Universe

- Nature Of The Universe
- The Ultimate Questions
- Signs Of Allah In The Universe
- Allah's Will
- Order, Permanence, and Change

Creation Of The Human, *khalq al insan*

- Creation Of The Human, *khalq al insan*
- Nature Of The Human, *tabi'at al insaan*
- Superiority Of Humans, *afdhaliyyat al insaan*
- Mission Of Humans On Earth, *risalat al insan fi al ardh*
- Diversity Of Humans, *tafaawut al bashar*

Nature Of The Universe, *tabi'at al kaun*

The Creator, *al khaaliq*

Everything in the universe was created. Allah is the sole creator of the universe and all its contents (what exists, what existed before and what will exist in the future). He existed before the universe and will outlive it. There is no associate with Allah in creation and no one else has the power of creation. Creation is a continuous process in biology (reproduction by mitosis and meiosis) and physics (fission and fusion of particles). The creation of the earth and heaven is inferior to that of humans.

The Universe, *al 'aalamiin*

The universe consists of the earth, the sky, the space that encloses them both, and the space between them. It includes the stars, the planets, comets, galaxies, meteors, empty space, human and other all forms of life. It is subservient to Allah. Its creation lasted 6 days. The sky was created first as a vapor. It

was followed by creation of time (night and day). Then the earth was created with water and mountains. After creation of the earth, the sky was divided into 7 skies. At one time the earth and the sky were together then they were separated. Astronomical knowledge has not yet explained the concepts of 7 skies and 7 earths. The throne, *arsh*, is above the universe. The chair, *kursiy*, envelopes both the earth and the sky. Part of the universe can be perceived by human senses and is called the world of the seen, '*Aalam al shahadat*' is the universe perceived by human senses but '*Aalam al ghaib*' is not. Paradise, *jannat*, and hell, *jahannam*, were created and are part of the universe.

The Earth

Known human history is about 7000 years but the duration of pre-history is unknown. What remains of the earth's lifespan is like the time between *salat al asr* and *salat al maghrib*. The earth and its contents were created before creation of humans. Study of the earth reveals Allah's signs that are a moral lesson and a reminder. The earth is wide and humans inhabit only a small portion of it. It is however very tiny compared to the size of the whole universe. The earth is standing on its own without pillars to give it firmament. It is dynamically stable being able to move by rotation on its axis, revolution around the sun, and movements of plate tectonics. All continents were one land mass (called Pangaea) that broke up into several continents. The earth is a sphere flat in some places and mountainous in others. It is orderly and exerts gravitational force. Its surface is variable in topography, climate, and vegetation. About 70% of its surface covered with water. Only a very small part of the earth's surface, called the biosphere (soil and atmosphere), supports life. The earth has many bounties that Allah put there for humans and other living things.

The Sky, *al samaau*

The sky is very wide and expansive. Its inhabitants are humans and angels. The sun, the moon, and the stars are either below the sky or are attached to it. It is the roof of the earth. It has

layers, doors, and guards. It is held in place and is orderly. The order will be destroyed on the last day. It contains life. It is subservient to the human. Stones, water, and food fall from the sky. The sky can cry. The sun is a source of light. It is stable. It also has precise movements. It rises and sets at a different place every day throughout the year. It prostrates at Allah's throne and those who worship it are misguided. Day and night alternate with movements of the sun. At the start both the sun and the moon emitted light but later the moon lost its light and only reflected the sun's light during the night. Stars are sources of electromagnetic energy. They are used for navigation. They are subservient and prostrate to Allah in worship. They move in definite positions. They will fall on the last day and will be obliterated. The moon is a satellite of the earth. Its movements and positions are used for reckoning time. It is a source of light. Its crescent is used as a symbol of Islam. It is subservient and prostrates in worship to Allah. The ignorant worship the moon instead of worshipping Allah. On the last day the moon will be split and will disappear.

Outer Space, *aafaaq*

The term *aafaaq* refers to the far away space. It has Allah's signs. It is wide with millions of galaxies. Each galaxy consists of stars and objects around them. Our galaxy is the milk-way. Our sun is an average-sized star being one of 100 billion stars in the milk-way galaxy. Stars are arranged in 88 different patterns called constellations. Outer space is dark. The blue colour seen from the earth is due to scattering, diffraction, of blue rays from the sun. The universe is expanding. The galaxies are moving away from one another at a speed of thousands of miles a second.

The Ultimate Questions

Introduction

There are ultimate questions about the universe that are beyond human intellect. They can only be answered by revelation.

They are start of creation, end of creation, purpose of creation, and the ultimate destiny of the human. Several human attempts to answer the questions without the aid of revelation have not given satisfactory answers. These included metaphysics (understanding ultimate reality by reason), various religious beliefs, folklore, and empirical science.

Start Of The Universe

Human intellect cannot work out the start and the end of the universe. Human anthropometric arrogance has made them reject creation by Allah and theorized that the universe arose by chance or was created by humans. The driving force behind this curiosity is to understand the present and predict the future by knowing the origins. Scientific theories assert that the earth and the sun started as gases and dust that shrunk and clumped to become the solid we call earth. The earth melted, heavy metal settled at the bottom and lighter ones floated to the top. With time the earth cooled enough so that rainwater could settle down without evaporation. Atheistic scientists have theorized that life started on earth by chance and that various forms of life appeared by chance natural selection. Muslims believe in the Qur'anic account of creation. Allah preceded and created the universe. The pen was created first and it wrote a complete record of what would happen in the universe. Then fog and water were created. The throne was then created and floated on water. The earth was then created followed by mountains, plants, and animals. Next the sky was created. It was vapor at the beginning and was joined to the earth but was later separated. Different things were created at different times. Adam was the last creation being created *de novo* from basic elements of water and soil. All humans are descended from Adam. Human creation came at the end because all other creations had to be subservient to and serve humans (*taskhiir*).

End Of The Universe

The end of the universe is easier to grasp than the beginning. It is common human experience that everything has a beginning

and an end. The end usually signifies destruction and disappearance with or without replacement. The physical laws of entropy are a summary of the concept that every system must eventually self-destruct and come to an end. This should logically also apply to the universe. It is only Allah who is eternal and everlasting. He has no beginning and no end. The human mind cannot fully grasp concept infinity associated with Allah. Human life will come to end when the physical universe on which it depends comes to an end, Humans will however have extra-corporeal existence until they are resurrected in a physical form. Time will disappear when the sum used for measuring time is folded up.

Purpose Of Creation Of The Universe

The purposes of creation of the earths and heavens are several-fold as told by the Qur'an. There may be other purposes known only to Allah. First of all it was Allah's will to create them. He does what He wants and cannot be questioned. He is under no obligation to reveal reasons for His actions. Secondly the earths and heavens were created to submit to Allah and worship Him. Everything in the universe worships Allah in its own way even what are perceived by humans as being non-living such as stones, mountains, and rivers. The interdependence in the ecosystem required creation of various components for example plants were created to provide food for animals, and the plants need animal waste products. The earth was created as a test for the human. It has many signs and bounties from Allah. The successful will see them and submit to the creator.

The Expanding/Contracting Universe and Human Destiny

Cosmologists, scientists who study the origin and nature of the universe, have observed phenomena of the cosmos appearing to expand with its various components rapidly moving away from one another. They do not know if the universe is an open or closed system. If open it will go on expanding until all matter is converted into heat energy, a phenomenon called black holes. This is the heat death of the universe. If closed it

will stop expanding and fall back in a big bang creating a new universe. In either case there will be destruction. The Qur'an has taught that on the last day the universe as we know it today will be physically destroyed. All humans and all living things will die. Humans only among the living things will be resurrected into a new physical life that may be in *jannat* or *jahannam*.

Signs Of Allah In The Universe

Signs In The Universe

The Qur'an like no other book of religion calls upon humans to observe the empirical world and deliberate on its bounties and signs. The Qur'an for example encourages humans to explore space. Humans can learn a lot from the open book of Allah's signs in the universe. These signs are in the space. Other signs are in humans.

Believers And Signs

The believers see and understand the signs and as a result obey the creator. The signs increase their *iman* and *taqwat*. The righteous undertakes thinking about the signs. They understand the signs. Their certainty is increased as a result. They gain more knowledge. They express gratitude to the Lord for all the signs and bounties in the creation.

Unbelievers And Signs

The unbelievers reject the signs and behave arrogantly towards them. It is their arrogance that prevents them from seeing and appreciating the signs.

Challenge To Show Signs

The Qur'an has recorded many instances when the unbelievers have demanded signs from prophets. This is a very strange and preposterous demand. There are so many signs in the universe for them to see that there is no need to ask for any more.

Science And The Signs

Study of science especially medicine is part of observation and reflecting on Allah's creation, *tadabbur khalq Allah*. It enables

us discover many secrets of creation and many signs that Allah put in the universe for your education and intellectual growth and development. The creation of everything in pairs, the creation of opposites, symmetry, and harmony are some of the constant features of the universe that convince the human that there must be a grand design behind all this creation.

Allah's Will, *iraadat al Allah*

Allah Is Sovereign

Allah is the sovereign of the heavens and earths.

Allah's Unlimited Will

One of the attributes of Allah is having an independent and unfettered will. He does what He wants and wills and in whatever manner He desires. Any physical laws or any of His previous actions does not restrict him.

Allah's Will And Order In The Universe

The absolute will of Allah is logical and understandable. If Allah created the universe and all what is in it and He sustains them, He must have complete control otherwise disorder and confusion will reign.

Limited Human Will

The absolute will of Allah contrasts with the limited will of humans. Human will is limited and is constrained in many ways. Human knowledge and power are limited. There is wisdom in human will being limited. It enables humans to understand and appreciate Allah's unlimited will. This would not happen if they had no experiential knowledge of limited will.

Will Of Other Creations

Allah indeed honored humans by giving them a will that He did not give other creations. Angels have no will. *Jinns* have a limited will that they may use well and choose to believe or misuse and choose disbelief. Animals have no independent will. Their behavior is instinctual. Inanimate things have no will but they do whatever Allah wants them to do.

Order, Change And Permanence

Physical Laws

Phenomena in the universe are related in a causal way. The relations are not haphazard. The universe is ordered and is coordinated. Complex phenomena can be explained by a few simple mathematical equations that summarize physical laws. The physical laws accurately describe phenomena that appear complicated and very detailed. They serve as a reminder that the empirical world is simple and straightforward running on a few basic principles and paradigms. The physical laws according to which the universe is ordered are what the Qur'an calls *sunan al laah*. The *sunan* are among the signs of Allah, *ayat al allaah*. They are fixed and are characterized by stability, *thabat al sunan*. They therefore serve as a basis for predictability of empirical phenomena. They explain the consistency, repetition, parity, symmetry, harmony, coordination, and purposive ness of physical phenomena in the universe. Even apparent differences and exceptions follow some fixed laws.

Order

The universe is orderly, systematic, harmonious, and predictable. The order reflects Allah's will, is the best logical manifestation for one sole creator, and is open book and proof of *tauhid al rububbiyyat*. The human body in its gross and microscopic anatomy is a reflection of a high level of order. There is organizational order in all physiological functions. Existence of orderly relationships is the basis of medical treatment. If the chemical reactions were not predictable and orderly, each instance of disease would require new research to discover the right medicine for it. Scientific research would not be possible if there was no order in the universe. There are physical laws that describe and summarize this order. The purpose of all scientific investigation is to find these laws, understand them, and use them for the benefit of humans. The universe has a stable state to which it returns after temporary

disturbances. This state is referred to as homeostasis in physiology. Negative feedback maintains homeostasis. Compensatory mechanisms in normal physiology assure return to the normal resting state. In patho-physiological situations, corrective mechanisms fail to restore order after disturbances and this results eventually into definitive pathological changes and disease.

Change

Only Allah is permanent. Everything else changes continuously. The physical laws are also permanent but their application in different circumstances produces different results. Change is a constant phenomenon in the in nature. The miracle of Allah's creation is that changes are regulated and are co-ordinated. They follow a system. Such phenomena can occur only occur in a situation in which there is one powerful creator for the universe. One of the major discoveries in science is that matter and energy are inter-changeable. Day and night follow each other in a predictable way. The sun and the moon move in fixed orbit and move according to accurate and predictable reckoning. Climate or weather is one of the manifestations of constant change. Periods of rapid growth in infancy and adolescence are periods of major and rapid biological change. This change is not chaotic. It follows a fixed predictable order. This biological clock operates on a daily basis i.e. hours of sleep and wakefulness. It also operates on a monthly basis for female menstruation. Physiological reactions and processes are in a state of constant change. The change is according to a definite order and is not chaotic.

The Seen, *shahadat*, & The Unseen, *al ghaib*

The world of the unseen has two components: the absolute, *ghaib mutlaq*, and the relative, *ghaib nisbi*. The nature of the *ruh*, knowledge of the time of the last day, time of human death, are *ghaib mutlaq*. Examples of *ghaib nisbi* are: knowledge of the past and knowledge of contemporary events. Most phenomena in the physical universe are *ghaib nisbi*. Humans through research or just waiting for long enough can

get to know things that were unknown before. The Qur'an and sunnah provide humans with sufficient knowledge of the *ghaib mutlaq* for them to conduct their affairs.

Balance and Equilibrium

The Qur'anic concept of *wasatiyyat* is used to refer to the average, the middle ranks, or the normal expectation. The law of action and reaction, *tadafu'u*, is necessary to restore and maintain order. Being objective allows humans to maintain order. If personal whims and fancies were followed there would be a lot of anarchy and chaos. Minimizing changes and maintaining constancy is desirable in some physical phenomena in order to maintain order. Allah in His mercy also allows changes because rigid constancy would not allow response and adjustment to changing circumstances.

Creation Of The Human, *khalq al insan*

Basic Concepts

Allah the creator is different from the created. He is infinite and all-knowing. Humans being created cannot participate in any way in the creation process. Humans were created after animals and plants. They are of dual nature being made from *ruh* and matter. Adam was from the elements of the earth. Allah then inserted the root into him making him a human. When the *ruh* was put in Adam, Allah ordered all angels to bow to him. All the angels followed Allah's order except the proud Iblis. Adam was given knowledge superior to that of angels by being taught the names of all things. Adam then settled in *jannat* with his wife but was misled into disobedience by shaitan. He repented and was forgiven by Allah. Adam then descended to earth where he became a prophet and the father of all humans. Descendants of Adam were one community united on the creed of *tauhid*. When they deviated Nuh was sent to call them back to *tauhid*. Humans were created *de novo* as humans. All humans have a common biological origin and are different from other creations of Allah.

Uniqueness Of Human Creation

Human creation is optimal in structure and function. It is beautiful, orderly, harmonious, organized, and precise. It manifests signs of Allah. It is superior to and is honored above all other creations. It is unique and the most sophisticated. Humans have 3 unique features: the *ruh*, carrying *amanat*, *khilafat*, and *taskhiir*. The human is dual being both body and soul; matter and spirit. Animals have only the body whereas angels have only the soul. Humans agreed to carry *amanat* while all other creations were afraid to do so. Humans were placed on earth as viscegerants. All other creations were made subservient to humans.

Creation And Not Evolution, *khalq wa laisa tatwiir*

The Qur'an teaches that Adam was created *de novo* as a human. Human history therefore starts from Adam the fully formed human being. All human beings have the same biological origin, *asl al insan wahid*. Human creation was a deliberate and not a random or accidental event. It was revolutionary and not evolutionary. Islam believes in a creator God. Evolution by natural selection is denial of the existence of a creator God. Our arguments against the theory of evolution are based on the premise that it is a theory that is unproven. The theory has been continually updated to fit new data while its atheistic and non-scientific core was left intact. Creation is a simpler explanation of the data on similarities and differences among living things than evolution by natural selection. Darwin's theory of evolution by natural selection gave a pseudo scientific support for atheism and animalism. Atheism is denies the existence of a creator God worthy of worship. Animalism asserts that humans are like animals and have no special or superior moral standing. Persistence of the theory of evolution is supported by three practical motivations: racism, colonialism, and class exploitation.

Special Cases Of Creation

According to the Qur'an two humans were created in a different way: Adam and Isa. Adam (PBUH) was created without a father or a mother. Isa (PBUH) was created only from a mother and no father. Adam was more of a miracle

because he had no parent at all. These differences are not unique when we look at the whole scheme of Allah's creation. There are many examples of reproduction in the animal and plant kingdoms in which only one parent is involved.

Parity In Creation

Parity found in human creation is part of the general phenomenon of parity found in other creations of Allah. The Qur'an has mentioned parity in all creation. There is parity in humans. There is parity in animals, parity in plants, and parity in physical phenomena like day and night.

Nature Of The Human, *tabi'at al insaan*

The Natural State, *fitrat*

Allah the creator created humans in the state of *fitra*. This is the best state both biologically, morally, socially, and psychologically. *Fitrat* can be degraded or distorted by human behavior biologically, morally, and in terms of '*aqidat*. Both nature and nurture play a role in human action and behavior. The relative role of each varies according to what aspects of human biology and behavior are being considered. The basic human *fitrat* enables humans to know the bad from the good in most cases without the need for revelation, *wahy*. Revelation and human experience only reinforce what is known innately. There are however a few aspects that humans cannot know without the guidance of revelation. Humans have innate weaknesses in their *fitrat*.

The Essence: Nafs, Qalb, Ruh

The essence of the human is the *nafs*. The words *qalb* and *ruh* are also used to mean *nafs*. The exact nature of the *nafs*, *ruh*, or *qalb* is in Allah's knowledge. The *nafs* has three levels: prone to evil, *nafs ammara*; self-reproaching, *nafs lawamat*; and perfect, *nafs kaamilat*. The *nafs kaamilat* is satisfied, *nafs mutmainnat*; pleased, *nafs raadhiyat*; and pleasing, *nafs mardhiyat*. There are many signs of Allah in the *nafs*. The *nafs* has positive and negative attributes. It can change to the good or the bad. The *qalb* has been described as associated with

iman, emotions, sensation, intellect, responsibility, and guidance. Diseases of the *qalb* include *lahw*, *ghaflah*, *ghill*, *ghaidh*, *kibr*, and *nifaq*. The *qalb* can be influenced or changed. The *ruh* is eternal. It was created before the body. It is the essential difference between a human and an animal. The *ruh* does not return to earth after death. Those who claim to make contact with souls of the dead are liars. Islam does not accept the concept of transmutation of souls (movement of the *ruh* from one person to another). It also does not accept reincarnation.

Duality

The non-material part of the human is the *nafs* or the *ruh*. It is the essence and the most important. It is the source of identity for each individual human. It is permanent existing before and after the end of the physical part of the human. The physical form of the human body is temporary. The uniqueness of the human lies in the duality of matter and *ruh*. Human behavior is a reflection of the dual nature but the *ruh* and *nafs* have overriding control over the body. The physical part of the human through the hormonal and neural drives is also responsible for some types of behavior.

Relation With The Unseen, 'alaqat al insan bi 'alam al ghaib

Muslims believe in the unseen. They have only a one-way contact with the unseen through the verses of the Qur'an. Allah the almighty is watching and knows what the entire human is doing and nothing can be hidden from Him. Angels and *jinn* are part of the unseen. They intervene in human actions but most ordinary humans cannot initiate any contacts with them. The human lives and functions in the empirical world of the seen. Scientific empirical prediction of the future or reconstructions of the past are not intrusions into the unseen because they are interpretations of empirical data that may not always be perfect.

Attributes Of The Human, sifaat al insan

It is a unique duality of the human that he has both negative and positive attributes. The human is superior because of ability to do good despite the potential for evil. The positive

attributes of humans as: gratitude, desire of both the earth and the heaven, and belief. On the negative side the human is described as proud, unjust, hasty, miserly, ignorant, foolhardy, neglectful, evil-doer, spreader of evil, denier of the truth, *kafir* & *kafuur*, polytheist, hypocrite, niggardly, argumentative, perfidious, adversarial, despairing, impatient, fretful, transgressor, self-sufficient, ungrateful, denier of favors, and lover of passions. The most important attribute of humans is intelligence that is highly developed, sophisticated, specialized, and capable of abstract thought and problem solving. Human aggression is a constant characteristic of humans as individuals and societies. It always leads to destruction. Aggression can be against the self, *dhulm al nafs*, other humans, *dhulm al ghair*. Aggression is the final pathway for many of human weaknesses and failures. The first recorded act of human aggression was homicide committed by one of Adam's sons because of jealousy. Since then human history has been characterized by aggression of various types and kinds. Human aggression is so much that even when seeking recreation, they have a tendency towards sports like boxing, wrestling and others that allow expression of the inner tension or aggression.

Superiority Of Humans, *afdhaliyyat al insaan*

Criterion Of Superiority, *mi'iyaa al afdhaliyyat*

Humans aware of their superiority and distinction from other creations will have the self-confidence and self-esteem and will power needed to adopt and maintain healthy life-styles. Present medical technology and knowledge are sufficient to eradicate most human physical diseases if humans were willing to change to healthy lifestyles. The human is superior to every other living and non-living thing that Allah created. Allah honored the human above all other creation. Human superiority is due special attributes and capacities that Allah endowed the human with. Human superiority is not based on body size, physical strength, or any special anatomical or physiological function. Human superiority is generic and not specific for any individual human. Humans as a group are superior to other

creations but individual humans may not be. Human superiority is not a right. It is a potential that can be developed or can be neglected. Not every single human individual can claim this superiority. Humans can rise to the summits of excellence. Humans can also fall to be the lowest of the low and could be worse off than animals. *Taqwa* is the basic criterion of superiority. It is a final common pathway for the 4 criteria of human superiority: intellect, '*aql*'; a free will, *iraadat*; responsibility, *amaanat*; and moral guidance, *hidaayat*.

Intellect And Knowledge, '*aql* and '*ilm*

Intellect is the most important criterion of human superiority and the other criteria depend on it either directly or indirectly. In the absence of the intellect, the rest of the criteria of superiority lose their significance. The superior human intellect is due to a better-developed and sophisticated cerebral cortex. The intellect enables humans to analyze, understand, and learn knowledge that is the basis for human action. Unlike other creations of Allah humans can enlarge their corpus of knowledge through research. Human control of the physical universe is made possible by their intellect. Closely related to intellect is the power of speech and communication that enables humans to carry out social intercourse and thus succeed in living in families and communities. The human can use the intellect well by thinking and deliberating on Allah's creation and doing good. The intellect can also be misused to cause harm to self, the society, and the eco-system.

Free Will, *al-iraadat*

The human has a will that is defined and is limited. It is subservient to Allah's authority. The human is personally accountable for actions done within this limited free will. Having a free will is an indicator of human maturity since it was not given to other creations. Humans are tested on how well they use their free will. They may pass the test or fail the test. Allah in His mercy always is ready to forgive if they turn to him in *repentance*, *taubat*, and are determined to pass the test when given a **new chance**. Human will can be used positively in working and preparing for the life hereafter and

doing good. Human will can also be used negatively for pursuit of pleasures of the earth, doing evil, and transgression.

The Trust, *al amanat*

Amanat is obedience and fulfilling duties. It is comprehensive covering '*ibadat, iman*, the self, the family, the society, and the whole eco-system. It includes the present and the future times. *Amanat* is the basis for human responsibility and accountability. Fulfilling the *amanat* is by doing the right. Failing the *amanat* is failing to do the right. It is part of Allah's grace that failure does not affect all humans all the time and in all places. At any one time there is someone somewhere carrying the *amanat* responsibly

Moral Guidance, *hidayat*

Allah honored and dignified humans by giving them a free choice to choose between right and wrong, good and evil. Allah's will is involved in human guidance. He guides only those who have already made the initial choice and taken steps towards *hidayat*. Humans, in the pure state of *fitra*, have an innate concept of what is good and what is bad. They however can make mistakes in some complicated matters. Allah in His mercy revealed the comprehensive code of the *shari'at* to help humans identify the good and do it as well as identify the bad and avoid it. Humans can live in societies regulated by a moral code. Humans can choose to live morally in their individual lives. The righteous, *saalihiin*, are humans who exemplify very high levels of morality by seeking to do good even in the most difficult conditions. The highest level of this morality is to seek the ultimate pleasure of Allah

Mission Of Humans On Earth

Definition Of The Mission, *mafhuum risaalat al insaan*

'*Ibadat* is the purpose of creation. It in turn defines the mission of humans on earth. The mission of the human is therefore to undertake '*ibadat*. A human who establishes '*ibadat* is successful in the mission. The concept of '*ibadat* in Islam is very wide. It includes virtually all human endeavor and all human activities. Closely related to '*ibadat* is the concepts of

istikhlaf (vicegerancy of the human on earth) and *isti'imar* (building of a material civilization on earth). Both *istikhlaf* and *isti'imar* are part of the mission of humans on earth.

Scope Of The Mission, *huduud al risaalat*

The scope of the human mission is as wide as the scope of *'ibadat*. *'Ibadat* in Islam is comprehensive embracing all human endeavors done in sincerity and without disobeying any of Allah's commands. Although every human endeavor can be *'ibadat*, only those undertaken with the correct intention, *niyyat*, are rewarded as *'ibadat*. An act of *'ibadat* can therefore not be accidental. It must be a consequence of a deliberate choice and intention. The human mission covers responsibility in the family, in the community, and in the eco-system.

Duration Of The Mission

The duration of human responsibility covers the present and the future. It does not include the past, no human can be held accountable for actions that they were not a party to. While humans undertake work to build and maintain a civilization today they must have a sense of responsibility for generations to come. The benefits of today must be balanced against the harm of tomorrow. The continuity of the mission requires that a human is engaged in a continuous way in fulfilling the mission. Since the mission is of finite duration, humans must be aware that there is accountability, *hisaab*, at the end with rewards and punishments. The nature and level of responsibility for the mission varies with time in two ways: chronological age and calendar time. Children, adults, and the elderly have different responsibilities. Different epochs in human history have posed different challenges and hence different levels of responsibility. With passage of time, humans tend to forget or neglect the mission. The constant challenge before humans is to resist forces of evil that take them away from their mission.

Success, *falah*

The Qur'an has used the word *falah* to refer to the success of humans in their mission. Success can be on earth or in the hereafter. Complete success must be both on earth and the

hereafter. Success on earth is a pre-requisite for success in the hereafter. However it is possible to succeed on earth but commit mistakes towards the end of earthly life that lead to failure and regret in the hereafter. *Falah* includes material success on earth and spiritual success. Both types of success depend on human effort on earth. It is a unique feature of Islam that all human endeavors that are good contribute to both types of success at the same time. *Falah* can be achieved by having a strong *iman*, *tazkiyat*, *taqwat*, *ta'at*, *dhikr Allah*, *'amal salih*, *amr al ma'aruf*, *nahy al munkar*, *infaq*, *tawbat*, and *jihad*.

Failure, *khaibat*

Failure at the individual level is not worshipping Allah as was enjoined. A community can fail if it does not follow and uphold the laws of Allah that are needed to guide human action. The failure of the human in his mission manifests as transgression *dhulm*, *kufur*, and *ma'asiyat*. Humans can fail in their mission as a result of internal motivation or external motivation. Internal motivation is due to innate evil promptings in the person that predispose to sinning or neglect of duty. External motivation is due to shaitan who presenting in the form of a human or *jinn* misleads the human and leads him or her to err. Most cases of human failure are due to the work of *shaitan*.

Diversity Of Humans

Common Biological Origin

All humans were created from one single origin. This means that there are shared characteristics among all humans. All humans are from Adam. Modern discoveries about DNA and the molecular basis of life prove that there is a biological commonality that must have been caused by a common origin. Unity of humanity is based on the common biological origin. Islam does not accept the concept of sub-human types. Primates may have external features similar to humans but they are, like humans, a unique creation by Allah and not a sub-human type. As far as we know all offspring of Adam are on planet earth. Humans differ from angels and *jinn*. Humans have

a physical body whereas angels are only energy. Humans have a free will but angels have none.

Common Social Origin

Humans started as one family that of Adam. They were at one time one community or nation. They share common traits. They have a sense of family and kinship. The sending of prophets to different communities with the same message has reinforced the common social origin of humanity. Because humans all arose from one primordial civilization, we can detect many similar social institutions in people living in different parts of the globe. The common social origin of all humans has also been reinforced by transmission of culture from place to place and from one generation to the next.

Biological Similarities

Biological similarities should actually point to one creator and not necessary one original primordial creature that evolved down the ages. Biological similarities among humans are based on common genetic control based on DNA, the same cellular structure and function, same chemical composition and function Human DNA is similar across many human groups. The cell is the basic building block of the body. There are hardly any detectable differences in structure or function of cells among different human groups. The bio-chemical and metabolic functions of the cells are all the same. There is specialization among cells therefore they differ in structure and some of their physiological functions. The ability of humans of different racial and ethnic groups to inter-breed is further proof of their biological similarity.

Biological Differences

Biological differences indicate the power of the creator to create variations while at the same time there are commonalities. These differences were created by Allah and did not arise as passive adaptations to the environment. Allah deliberately created these differences to coincide with the geographical habitat, the environment, or the ecological niche in which they live. Basic biological differences among humans can be described as based on skin color and minor variations of

body anatomy and physiology (weight, height, disease susceptibility, external physiognomy) that are used in a rather vague way to define three basic racial types: Caucasian, mongoloid, and Negroid. The races cannot be distinguished on the basis of genetic or DNA structure. Allah deliberately created differences in color as one of His signs. Skin color is due to varying amounts of melanin and carotene. Minor variations of body anatomy and physiology include weight, height, and external physiognomy. These are apparently not established differences because secular variations have been observed over time. There is no generally accepted scientific evidence that differences among humans due to the environment cumulate and lead to evolution of a different species. All humans are one species and can intermarry and reproduce.

Other Differences

Humans vary by gender, race, customs, language, and social organization. Males and females are different biologically, psychologically, and emotionally. These differences do not indicate superiority or inferiority. They are rather part of Allah's scheme for a balanced society with specialized and complementary functions. There is no pure or homogenous race because of extensive interbreeding. Customs are ways of living followed by a great many people. They are transmitted from generation to generation. Customs are a factor of similarity within the community and factors of differences between communities. Different languages were created by Allah as one of His signs. Languages change continuously as they adapt to differing needs of communities. The physical environment imposes social similarities on all people living in it that differentiate them from those living in other environments. Each individual has a unique biological and spiritual identity. Not all people will be the same even when given equal opportunities. These differences do not by themselves confer any superiority. The only true criterion of human excellence is *taqwa* and only Allah can determine an individual's level of *taqwa*.

Life, Health, and Growth

Life and Health

- Life, *al hayat*
- Death, *al mawt, al mamaat*
- Health, *sihat & 'aafiyat*
- Disease *al maradh & tatbiib*
- Medical Treatment, *Al Tatbib, Al Tibaabat*

Growth & Senescence, *numuw & shaykhukhat*

- Intra-Uterine Period, *rahim*
- Infancy & Childhood, *tufuulat*
- Youth, *sinn al shudd*
- Middle Age, *sinn al rushd 40-60*
- Old Age, *shaykhuukhat, kibr, haram*

Life, *hayat*

Definition Of Life

Life is a complex phenomenon with biological, chemical, and spiritual components. Both life and death are earthly phenomena. Life exists in the hereafter; but death does not. Humans share biological life with plants and animals. They share spiritual life with angels. No other creation of Allah resembles humans in having physical and spiritual life at the same time. Life without any spirituality is not a full human life but is a life of animals. Life can be described at various levels: *ruh*, the whole living organism, the organ, the tissue, the cell, sub-cellular structures, the molecule, and the atom. The highest level is that of the *ruh* about which we know very little. We however know that the *ruh* is the essence of human life and that it is eternal. The *ruh* is inserted in the fetus during intra-uterine life to give it human life, *nafakh al ruh*. Human life started with the stage of *ruh* when Allah took the covenant. This was life at a spiritual level. It became life in a material form with the creation of Adam and his wife Hawa. They were created from clay and became full perfect humans when the

ruh was inserted into them. Biological life can be looked at in three stages: pre-uterine, uterine, the post-uterine phases. The post-uterine phase has in return got two stages: life on earth, *hayat al duniyat*, and life in the hereafter, *hayat al akhirat*. Life belongs to Allah and not the human. Allah gives and takes away life. Humans do not own their life but are temporary custodians of life enjoined to take good care of it. Humans have no control over life or death (25:3).

The Qur'anic Concepts Of Life

Allah gives life and takes it away. Nobody else has control over life. Humans created from the basic elements of earth and water. They result from semen and the union of male and female gametes, *nutfat*. The Qur'an has in many verses described the stages of creation starting with the soul, then the *nutfat*, then the clot then the flesh. The Qur'an describes processes of life after birth that are basic necessities of life, *dharurat*, such as eating, drinking, reproduction and defecation. The processes may also be needs, *haajiyaat*, that make life more meaningful for example vision, hearing, and speech. The processes may also be *tahsiinaat* such as the intellect, '*aql*, consciousness, *shu'uur*, and the *qalb*. The nature of the insertion of the *ruh* is not known for certain to us. It may be a purely spiritual phenomenon or may have some biological and physical aspects. The *ruh* is the permanent essence of life.

Nature Of Life

There is a continuum in human life. The start is the state on non-existence, '*adam*. Allah then created the souls and took an undertaking from them to worship him. Starting with Adam (PBUH) Allah created a physical body to house those souls during life on earth, *hayat al duniyat*. The physical part of existence on earth ends with physical death and the souls continue existing into eternity. Life in the integerrum, *hayat al barzakh* is an intermediate stage between life on earth, *hayat al duniyat*, and life in the hereafter, *hayat al akhirat*. In the hereafter human life will re-assume its physical form with the resurrection, *al ba'ath*. Life in the hereafter will be eternal. Human life on earth has a definite time span, *ajal*. No human endeavor including the most advanced medical procedures can

shorten or extend this time span. The whole purpose of medicine is to exert maximum efforts to improve the quality of remaining life since Allah alone knows the timing of the *ajal*. The first and most important purpose of life is worship of Allah, *'ibadat*. Life can be a happy one, *hayat saidat/hayat taibbat*, or unhappy, *hayat dhankat*. A good life is related to good deeds (16:97). Success and failure are experienced both on earth and in the hereafter.

Quality Of Life

The quality of life can be defined in physical, mental, or spiritual dimensions. The physical criteria are: absence of disease, comfortable environment, and basic necessities. The mental criteria are: calmness, absence of neurosis and anxiety, and purposive life. The spiritual criteria are mainly correct relation with the creator.

Value Of Life

Human life is a gift from Allah, *ni'imah al hayat*. Humans must be grateful to Allah for the gift of life by worshipping Him, *ibadat*. The prophet said that good health, *sihhat*, and *afiyat* are two bounties that many people do not enjoy. Each human has an inalienable right to life from Allah, *haqq al hayat*. The sanctity of life, *hurmat al nafs* is guaranteed by the Qur'an. The life of each single individual whatever be his or her age, social status or state of health is important and is as equally important as the life of any other human. Protection of life, *'ismat al hayat/hifdh al nafs*, is the second most important purpose of the *shariat* coming second only to the protection of the *diin*. No material value can be put on human life. Every life is as important as any other life. Destroying the life of one person is equivalent to destroying the life of all humans.

Death, *al mawt*

Definition Of Death

Death can be defined as moral, legal, or biological death. Death could be permanent with cessation of all physiological functions. It could be temporary such as in sleep.

Nature Of Death

There is a continuous cycle involving life and death. Life arises from death and vice versa (3:27 & 10:31). All human endeavors cease with death (4:18 & 63:10). Death is followed by burial in the grave, *qabr* (90:21). There may be reward or punishment in the grave. *Barzakh* (23:100) is a transitional phase between life on earth and life in the hereafter. On the last day humans will be resurrected back to life, *ba'ath* (6:36 & 86:8-10). The Qur'an makes it clear that it will be physical life with physical bodies. On resurrection people will be gathered, *al hashr ba'da al mawt* (2:203 & 100:9-10). Those who committed transgressions will be punished in hell for a limited time with the exception of those who committed *shirk* who will be condemned to stay in hell forever. Paradise, *jannat*, will be the permanent abode of the righteous.

There will be no more death in the hereafter (14:17 & 87:13). All humans will eventually die, *shumuliyat al mawt* (3:154 & 55:26). Humans fear death, *hadhar al mawt* (2:19 & 2:243). In view of the inevitability of death, *hatmiyyat al mawt*, it is futile to attempt to avoid death or think of its removal, *istihalat dafu al mawt* (3:154 & 62:8). Modern biotechnology discoveries of artificial life support, cloning, and frozen embryos are not in essence prolongation of life. Human death has finality to it. There is no reincarnation. There is only resurrection in the hereafter. There will be no more death after the day of Judgment and life will be eternal (14:17 & 87:13). Death is a transition to life after death, *al hayat ba'da al mawt* (2:28 & 30:40). Death could therefore be a welcome event for good people who look forward to a better life in the future. Good death is to die in Islam, *al mawt ala al Islam* (2:132 & 3:102). The best of death is to die when struggling in Allah's way, *al mawt fi sabilillahi* (4:100 & 33:23). Death in unbelief, *al mawt ala al kufr* (2:161 & 47:34) is bad death.

Attitudes To Death

Death and its occurrence are in the hands of Allah, *taqdiir al mawt mina al llah* (2:243 & 76:28). Good people welcome death as a *rite de passage* to a better existence in the hereafter.

They look forward to death, *al shawq ila al mawt* as a happy event. The approach of death is an opportunity for repentance, *tawbat* (4:18 & 23:99). Death is an occasion for reminding and remembering the hereafter. Humans are apprehensive about death, *al hadhr mina al maw* and often fear it, *khawf al mawt* (2:19, 2:243). Wishing for death, *isti'ijaal al mawt, tamanni al mawt*, in desperation with severe painful illness is discouraged. The wish for death, *tamanni al mawt* (2:94-95 & 62:6-7) can be negative for the escapist who looks to death as a relief from present psychological or physical distress. Committing suicide, *qatl al nafs & intihaar*, is definitely forbidden and puts someone outside the fold of Islam. Death is a trial, *ibtala'a bi al mawt* (21:35 & 77:2) and is a calamity, *musibat al mawt* (5:106).

Process Of Death

The process of death is long. It starts with the humanly understood causes like infection or trauma. The body progressively fails until a point of no return is reached. There is a point during this process when the angels take away the *ruh* thus separating the essence from the body (4:97 & 47:27). The Qur'an has described the process of death using terminology such as *sakrat al mawt* (6:93 & 79:1), *ghashiyat al mawt* (33:19 and 47:20) and *ghamrat al mawt* (6:93). The process of terminal death following Allah's laws, *sunan al llaah*, can not be reversed except in exceptional cases of divine intervention such as when Allah gave the prophet Isa (PBUH) the ability to revive the dead, *ihyaa al mawta* (3:49 & 19:29-33).

Criteria Of Death

Technological developments in intensive care units have blurred the demarcation between life and death that was taken for granted before. Many brain-dead people can be kept apparently alive on artificial respirators. The increase in transplantation has given momentum to the need to develop new criteria for death. This is because organs have to be harvested quite early in the death process to prevent them from further degeneration. The traditional criteria of death were respiratory failure, cardiac failure, and loss of consciousness.

Use of brain death as a criterion gives rise to ethical and legal problems because in cases of brain death, many other organs and functions of life are still alive. There are also controversies about the definition of brain death as a pathological entity. There is controversy whether it is death of the whole brain or specific parts of it. There is also disagreement whether criteria used for adults can be used for children.

Health, *sihat* & '*aafiyat*

Concept Of Good Health

Health is a positive state of being and not just absence of disease. Individuals who are disease-free may not be healthy. The components of good health are spiritual health, physical health, psychological and mental health, and social health. Islam looks at health sickness in the community will sooner or later have some negative impact on all the members. The holistic outlook also in a holistic sense. If any part of the body is sick the whole body is sick If a member of a family is sick the rest of the family are affected emotionally and psychologically. Any means that physical, emotional, psychological, and spiritual health are considered together. Health is relative and subjective. It varies by age, place, norms, gender, and state of *iman* or *tawakkul*. The Qur'an has used terms that refer to the general concept of holistic well being such as *raahat* and *raghad*. Health is often assessed subjectively using terms such as 'good health', 'healthy', 'poor health' and 'unhealthy'. Attempts have been made to measure health more objectively based on the 'disease model' which defines health is absence of disease. The best index would be one that includes both spiritual and physical parameters. Such an Islamic index has not yet been constructed to our knowledge. This index would also include criteria that reflect relations with Allah, with the self, with other humans, and with the environment. Keeping body in good health is a responsibility, *amanat*. Good health is a gift from Allah,. An ordinary person may not understand or appreciate the value of

good health when in good health. On falling sick, the value of good health is understood and is appreciated but most often for a limited time. Everything is forgotten as soon as the illness is over.

Determinants Of Health

The state of health is determined by nutrition, exposure to environmental risk factors, lifestyle, behavior, and *iman*. Diet is at the root of many diseases. The habitat also determines the character and behavior of people. The life style that people choose affects physical and mental health. The Qur'an has described several life-styles that are injurious to health such as *taraf* and *fasaad*. There is a strong relation between *iman*, character, behavior and health. Humans suffer from diseases of the heart such as jealousy, *hasad* and rancour, *hiqd*, that lead to violence in the person or those around him. These diseases may manifest physically as psychosomatic illnesses or may manifest more dramatically such as homicide or bodily injury. Addiction to alcohol or drugs is a reflection of weak *iman*. It leads to many physical and psychological diseases

Family Health

A healthy family promotes the health of all its members. There is no alternative to the family for child up-bringing. The family teaches trust, loyalty, a sense of belonging, and rights and responsibilities. It is an economic unit. It is the main source of primary health care. It is a source of calmness and tranquility. Threats to the family are extra-marital sexual relations, neglect of family duties in pursuit material goods, extreme individualism and self-interest, and bad socio-economic circumstances. Dysfunctional families are not healthy in the physical and psychological sense and have long-term impact on the children. The causes of family dysfunction are multiple: economic pressures, a hedonistic life-style, and decline of moral and religious values in the society.

Community Health

The Qur'an has described good and bad communities in the past. It described communities that were punished or destroyed by Allah sue to moral deviations. No community is destroyed

or is punished until it receives a warning from Allah. Community diagnosis is identifying and describing health problems in a community with a view to initiating public health interventions. Many communities are unhealthy in the physical and social or mental sense. Underlying causes of poor community health are social and moral such as social injustice, immorality, sexual promiscuity, over-nutrition, and addiction to alcohol and drugs. Community health can be improved by having healthy individuals in the community, fulfilling communally obligatory functions, and establishing mutual cooperation and mutual complementation.

Health Promotion

Most diseases can be prevented using spiritual approaches. These involve *aqiibat*, *ibadat*, avoiding *haram* and promoting *halaal*. Spiritual promotion at the community level involves enjoining the good and forbidding the evil. Physical health promotion at the individual level includes immunization, good nutrition, personal hygiene, and disinfection. Physical promotion at the community level involves environmental sanitation. Health promotion involves pro-active measures that make health better such as exercise, good nutrition; adequate rest; mental calmness; tranquility of family life, *iman* and spiritual calmness.

Disease, *al maradh*

Concepts Of Disease

Disease is divergence from the normal, *gaussian* mean, but not all deviation is disease because of the reserve capacity and ability of the body to adjust to variations. The demarcation between pathology and normal physiological variation can be fine. The definition of disease is very relative being affected by age, gender, culture, beliefs, socio-economic status, attitudes, and prevalence of diseases. Definition of disease considers several dimensions that may operate singly or in combination: moral or spiritual, biological or pathological, psychosocial, or normative statistical. Overall disease is a state of dis-

equilibrium, *khuruuj al badan 'an al i'tidaal*. A distinction must be made between disease as a pathological manifestation and illness that is a subjective feeling. Symptomatology is perhaps a better indication of disease severity because it includes the personality of the patient and reactions. Thus the same pathology does not produce the same symptomatology in all patients. Those with strong *iman* may complain less about pain than others. Prognosis is an empirical estimate of the future course of the disease based on available data and is not definitive because the final outcome is part of the knowledge of the unseen, *'ilm al ghaib*. The physician does not have the privilege to say anything definitive about the future prognosis. There is a 2-way interaction between diseases of the heart, *amradh al qalb*, and diseases of the body, *amradh al badan*. The Islamic position is to approach most diseases empirically and to be guided by experimental science. Islam rejects superstitious beliefs and practices in all their various forms and manifestations.

Basis Of Classification Of Disease

Diseases may be classified by their duration as acute or chronic, by cause as diseases of the heart, *amradh al qalb*, (2:10 & 74:31) and diseases of the body, *amradh al badan*, by life-stage as congenital or acquired, by nature as mental or organic, as local or systematic, and by organs afflicted. The physical environmental causes of disease are: infection, physical energy, degeneration, and breakdown of homeostatic control. Most disease processes are actually attempts by the body to repair damage. Some diseases are gender-specific because of the organ that is affected.

Nature Of Disease

Disease is a pathophysiological disturbance is normally a response to a biological, physical, or chemical insult or injury to the body. Thus most disease manifestations including their symptoms and signs are a reaction to the injury and an attempt to re-adjust. In an Islamic context, disease does not always connote a negative or bad event.

There are indeed many situations when what is a disease situation is actually beneficial. It forces us to rest, its pain teaches patience and forbearance, it is an opportunity for expiation/atonement for previous sins, *al maradh kaffaarat 'an ba'adhi al dhunuubi* (MB1949). The trials that one goes through and the eventual patience can be rewarded by Allah's forgiveness (MB1948, MB1951). Some diseases are due to disobedience. Acts of disobedience may be followed by epidemic disease or by disease in an individual. The disease may be directly related to the sin such as liver cirrhosis due to chronic alcohol consumption or there may be no direct relationship. The prophet taught that when communities commit inequities, Allah sends them diseases unknown in their ancestors. Many of the diseases of industrialized societies are related to lifestyle and may be Allah's punishment for various transgressions. Allah in recognition of the burden of disease and the need to give the body a chance to recuperate excused the sick from some physical religious obligations (2:10 & 73:20).

Causes Of Disease

According to the Islamic perspective every phenomenon in life has an immediate cause, *sabab* that humans can search for and find. However behind all these causes is the power and majesty of Allah who alone is the source of all causes, *musabbib al asbaab*. When all the factors that produce a certain pathological condition exist, we say that there is a sufficient cause of disease. There are empirical factors that must operate for a certain pathological condition to occur. These are referred to as necessary causes. Denying their existence is denying the cardinal principle of *sunan Allah fi al kawn* and is akin to superstitious belief. Human diseases, like the human organism, are complicated and usually several factors are involved in their causation. Humans may know some of the factors and ignore others. It is not necessary to know all the factors in order to treat a disease. Since the factors usually act in sequence, knowledge of only one may be sufficient to interrupt

the causal pathway. The causation, progression, and resolution of disease are in the hands of Allah and are part of *qadar*. It is Allah's pre-determination that a person falls sick. Humans try to understand disease processes in order to reverse them. This is not contradicting or opposing Allah's will. All what a physician does is with Allah's permission and is therefore part of pre-determination. Treatment and prevention of disease are not against *qadar* but are subsumed under the principle that *qadar* can reverse another *qadar*, *radd al qadar bi al qadar*. In the end all cure is from Allah and not the human (26:80).

Medical Treatment, *al tatbib, al tibaabat*

Cure Of Disease

Every disease has a treatment. Allah did not reveal any disease without also creating its cure. Humans are encouraged to seek treatment. Some people may know the cure and others may ignore it but it nevertheless exists. The Qur'an described cure of prophet Ayyub's disease (21:83-84 & 38:41-44) and how Isa (PBUH) cured chronic diseases (3:49 & 5:11). Humans try, but it is Allah who cures (21:83-84 & 38:41-42). Disease treatment is part of *qadar* (Tirmidhi K26 B21). Seeking treatment does not contradict *qadar* or *tawakkul*. Disease treatment is part of *qadr* and is reversal of *qadar* by another *qadar*, *rad al qadr bi al qadr*.

Preventive Medicine, *tibb wiqa'i*:

Preventive medicine, *tibb wiqa'i*, is covered under the Qur'anic concept of *wiqayat*. The Qur'an has used the concept of *wiqaya* in many situations to refer to taking preventive action. Prevention is therefore one of the fixed laws of Allah in the universe and its application to medicine therefore becomes most obvious. The concept of prevention, *wiqayat*, does not involve claiming to know the future or the unseen, *ghaib*, or even trying to reverse *qadar*. The human using limited human knowledge attempts to extrapolate from the present situation and anticipates certain disease conditions for which preventive

measures can be taken. Only Allah knows for sure whether the diseases will occur or not. The human uses knowledge of risk factors for particular diseases established empirically to predict disease risk. Preventive action usually involves alleviation or reversal of those risk factors.

Curative Medicine, *tibb 'ilaji*:

Curative medicine, *tibb 'ilaj*, may be spiritual, physical or both. Non-invasive approaches aiming at assisting the body fight disease are preferred to riskier invasive approaches.

Modalities Of Treatment

Among spiritual approaches to disease management is use of *dua* from the Qur'an (17:82) and hadith as *ruqiy*. The formulas for *ruqy* reported from the prophet, *al ruqiy al mathuur*, are *surat al fatihat*, *surat al falaq*, *surat al naas*, *ayat al kursi*, and various supplications by the prophet, *dua ma'athurat*. Other spiritual cures are reciting the Qur'an (Ibn Majah K31 B28, *dua* (Ahmad 2:446), asking for protection from Allah, *isti'adhat* and *salat* (Ibn Majah K31 B10). Among physical approaches to disease management are: diet, natural agents (chemical, animal and plant products), manufactured chemical agents, surgery, and physical treatment like heat. Physical approaches can reverse disease pathology, mitigate its effects or just stop farther progression. All therapeutic agents and procedures are allowed unless they contravene a specific provision of the law. This provides a wide scope for the practice of medicine. Medicine is bad and is forbidden (Tirmidhi K26 B7) if it causes more harm than benefit. Haram material is not allowed as medicine except in special circumstances where the legal principle of necessity, *dharurat*, applies. The side effects of medication must be considered alongside the benefits. Choice of what treatment modality to use involves careful weighing of benefits and possible harm or injury. Islamic Law gives priority to preventing harm over accruing a benefit. There should no dichotomy between spiritual and physical modalities of treatment. Both approaches

should be used for the same condition; they are complementary. Each cures the disease each using a different pathway. There is no contradiction but there is always synergy. It is a mistake to use one and reject the other.

Shirk In Seeking Cure

Shirk arises when humans seek and expect cure of disease from anything other than Allah. Forbidden *shirk* practices in disease treatment include: talismans (Muslim K39 H121), amulets (5:3 & 5:90), fortune telling (Muslim K39 H121), divination (Bukhari K76 B17), astrology (Ibn Majah K23 B28) sorcery (Bukhari K76 B17), and worshipping or asking cure from humans called saints by visiting their graves. Other superstitious practices usually associated with *shirk* are: claiming knowledge of the unseen and claiming supernatural powers by any human. Many people with disease conditions resort to shirk practices due to misguidance by shaitan. These practices nullify '*aqidat al tauhid* because they attribute disease and its cure to other than Allah. They also distract from seeking true treatment based on rational scientific medicine. *Jinn* possess limited power that is used to misguide and give credibility to *shirk* and superstition. The jinn do not know the unseen (15:17-18 & 72:8). A good Muslim should not be involved with *jinn*s and should ask Allah for protection against them (3:36 & 114:1-6). Some forms of dream interpretation, *tafsir al ahlam*, are forms of shirk. Only Allah knows for sure the correct interpretation of dreams. Limited ability to interpret dreams was given to some prophets (12:6 & 12:100-101). Other humans do not this ability. Therefore dreams of ordinary humans should have no role in the diagnosis, treatment and prognosis of disease.

Intra-Uterine, *rahim*

Origins

Adam was created *de novo* and not from any previous life. The rest of humans start life when maternal and paternal DNAs are combined in the process of fertilization. The rest of the human body is then built from basic elements of the earth: water and

soil. Human biological life manifests cyclicity. The human physical body is derived from the earth. On death of cells or the whole organism, elements found in one body return to the earth. The *nutfat* is a basic constituent of life. It is the primary germinal cells, the sperm in the male and the ovum in the female.

In essence *nutfat* is parental DNA. The prophet in many hadiths described the formation of the fetus in details that are akin to textbooks of embryology. Humans have one origin from Adam and from the earth. Various human races are one species that can interbreed. Humans however have different colors and structures. The biological differences among humans were created in a deliberate fashion by Allah and did not arise by chance.

Conception

The male gamete is the sperm and the female gamete is the ovum. About 50-100 sperms reach the ovum but only one penetrates it. The statistical probability of a particular genetic individual is low because only one sperm out of so many fertilizes the ovum. Chromosomal rearrangements are millions of possible combinations and permutations. An individual human is a unique creation of Allah selected out of trillions of possibilities. The start of a new human life legally recognized is at conception. However from a purely biological point of view there was life in the gametes even before conception. Sex determination involving the X and Y chromosomes is not a random process but a deliberate design by Allah to make some offspring male or female. The prophet explained that the offspring resembles both parents because they both contribute to its heredity. The fetus and child can acquire biological features not inherited from either parent due to environmental effect on the genotype. Behavioral characteristics can be transmitted from the parent as learning and culture but not as inheritance.

Embryological Correlations

Intra-uterine growth and development have been described by the Qur'an and hadith as occurring in stages. Allah had the

power to make an adult *de novo* as He did with Adam and Hawa. The likely reason for staged growth is to allow gradual interaction and adaptation to the external environment. The Qur'an has described 4 consecutive stages of embryological growth and development: implantation, '*alaaqat*, '*mudhghat*, '*idhaam*, and '*nash'at*, the stage of establishment. It is at the stage of *nash'at* that the spirit is inspired, '*nafkh al ruh*. The Qur'an has also described historical incidences on ensoulment of Adam, '*nafakh al ruh fi adam* and Isa. Several studies have been published of the correlation between descriptions of intra-uterine growth by the Qur'an and embryological sciences. Care must be exercised not to carry the correlation too far because the Qur'an is divine and its facts are stable whereas scientific facts change from time to time.

External And Internal Environments

The placenta mediates between maternal and fetal circulations. It enables exchange between the fetus and the external environment so that the fetus to satisfy its respiratory, circulatory, and excretory needs without laboring its growing organs. The organs still play a role because they need testing and preparation for later independent existence. The blood-placental barrier protects the fetus from environmental toxins by being very selective in what molecules are allowed to transit. It also protects the mother from some fetal products that could give rise to immune reactions. The amniotic membranes provide some mechanical protection. The amniotic fluid absorbs mechanical forces and thus cushions the fetus from harm. The fluid in the amniotic cavity plays a role in regulation of temperature. The growing fetus can respond to environmental stimuli. Scientific research in this area will yield more information in the future. The fetus is calmed and is reassured by hearing and feeling the maternal heartbeat. The fetus exercises all its muscles constantly. This is necessary for their growth.

Disorders Of Intra-Uterine Growth

The common disorders of intrauterine growth are growth retardation, immaturity of organ systems, malformations, fetal disease, and fetal death.

Infancy & Childhood, *tufuulat*

Parenthood

Childhood, *tufuulat*, the period from birth to puberty, is a period of limited ability and responsibility (24:31, 24:59, 40:67). Infancy is not a useless period. Great things happened to infants. Yahya was given wisdom while a baby 19:21. Isa spoke as a baby (19:29). The fetus is a person addressed as an individual by the Qur'an (53:32). A child or an infant is not a miniature adult. It has a distinct personality, identity, needs, and has to be handled differently. The scope of parental responsibility is wide starting with pregnancy (39:6, 53:32) and continuing until puberty and in most cases even beyond puberty. Parents are responsible for material support of their children and for educating and upbringing, *tarbiyat al awlad* (18:80-81 & 74:13). Children must be reared in a family (3:47 & 19:20). The Qur'an mentioned love for the child (20:38-40 & 28:10-13). Islam enjoins equal treatment of children, *'adl bayn al awlad* (Bukhari K51 B12). Islam teaches good treatment of female children as a preventive measure against abuse (Ahmad 1:235). Breast-feeding by the mother, *ridha'at*, has been emphasized by the Qur'an (2:233 & 46:15). It establishes both a biological and psychological bond between the mother and the baby. In order to complete the infant's biological and psychological growth and development, breast-feeding must continue for not less than 2 years (2:223, 31:14, 46:15).

Children In Qur'an and Sunnat

The following children later became prophets: Ismail, Musa, Yusuf, Yahya, Isa, and Muhammad. Maryam and the children that Khidr met were children of the righteous. The stories of the children of the prophet and his companions were also told. Also told were stories and the fate of children of evil doers.

Growth: Physical, Social, and Psychological

Babies can learn and retain information. The injunction to make *adhan* in the right ear for the newborn is perhaps an indication of this (Abudaud K40 B106). Under-estimation of

infants is the cause of under-stimulation by many parents. Children are born in a state of natural purity, fitra (Bukhari K23 B80). It is the parents who can misguide them (Muslim H6428). Good parents and a virtuous social environment will guide them to the good. Inadequate parents and a poor social environment will guide them to evil. Islamic law recognizes the age of 7 as the age of discrimination, *sinn al tamiiz*. Full intellectual maturity is not reached until the age of puberty. Children are therefore ordered to start praying at the age of 7 and are punished for missing prayers at the age of 10. Full legal responsibility is at puberty and by this time they have, according to Piaget, acquired abstract thinking to supplement the concrete thinking on which children rely. Social development starts with awareness of the self then the family and the neighborhood. As the child grows older, it becomes aware of membership in larger groupings: the tribe, *qabiilat*; the nation, the *ummah*, and the universe. At a later stage it learns about the history and the future. Gender identity is acquired quite early but its meaning and implications become deeper as the child grows. 'Aqiqat is a social occasion when the newborn is introduced into the community (Bukhari K71 B2). Development of social responsibility and accountability differ among children. That is why orphans are tested before they are given control over their inheritance (MB1199). Personality is the *nafs*. The Islamic view of personality is based on the Qur'anic concept of *nafs*. *Fitrat* to refer to what some call nature; the term nature has atheistic connotations. Each individual has a distinctive *fitrat*. Nurture introduces even more differences among individuals as environmental factors interact with the basic *fitrat*. A lot of behavior is copied or is assimilated from parents and other social role models. That is why it is very important to provide children with positive role models. They should never be exposed to negative role models even for brief moments.

Disorders Of Infancy

Common disorders of infancy are birth injuries, congenital malformations, perinatal infections, metabolic disorders, and neoplasms.

Disorders Of Childhood

Common disorders of childhood are developmental (especially sexual differentiation), nutritional, behavioural, and injuries.

Youth, *sinn al shudd*

Definitions

Adolescence is a period of transition from childhood to adulthood. It is rapid, complex, difficult, and can go wrong. It is part of the teenage period defined as ages 13-19 years. Puberty, *buluugh*, is the period when gonads are sufficiently developed to allow reproduction to occur. Puberty in males is the appearance of the first sperms and in females it is the first menstruation. In both genders attainment of the age of 15 years automatically defines puberty even if the biological signs have not been seen. The period of youth, *shabaab*, is that between puberty and the age of 40 years. It is the period of strength and physical maturity. At puberty a person becomes a legally responsible adult, *mukallaf*. Physical growth may not correlate with emotional and intellectual development and this is a source of problems.

Youths In The Qur'an and Sunnat

Youths who became prophets were Muhammad, Musa, Ismail, and Yusuf. The people of the cave were righteous youths. Luqman's son was also a righteous youth who obeyed his father. Stories of righteous youths among the companions are told about Ali Ibn Abi Talib, Usamah Ibn Zayd, Abdullah Ibn Abbas, Abdullah Ibn Omar, Abdullah Ibn Amre Bin Al Aas, and Abdullah Ibn Al Zubayr.

The Adolescent

Spermache marks puberty in males. It is accompanied by the pubertal growth spurt and appearance of male secondary sexual characteristics (testicular enlargement, penile enlargement, sexual hair growth, voice changes, muscle enlargement, regular frequent erections with ejaculation). These physical changes are accompanied by behavioral changes. Physical changes in females are more dramatic. The larche is development of

breasts. Puberchy is development of pubic hair. Menarche, the 1st menstrual period, is the legally accepted definition of puberty. Female secondary sexual characteristics include breast development, sexual hair growth, and increase in body fat. Other changes include changes in sensory organs, and changes in functional organs. Among the accompanying behavioral changes are intellectual and psychological changes, emotional changes (moodiness and depressive effects). Adolescence is a time of tension and contradictions. The adolescent is physically an adult who could even start a family. He feels independent but cannot live without dependence on parents. His behavior is impulsive and he tries to rebel against childhood restrictions but is yet unsure of what roles to play: childhood or adult roles? Acquisition of abstract thinking gives the teenagers more powerful reasoning abilities and they feel very intelligent. They become intellectually arrogant reasoning things out and acting on erroneous conclusions. They are often wrong in their reasoning because they lack wisdom and experience. Females experience an earlier pubertal spurt. There is hikmat in this because females start their reproductive careers earlier.

The Young Adult (early adulthood)

Physical growth essentially stops at the age of 21. Then the period of young adulthood starts and ends at the age of 39. It is characterized by optimal health status, maximal energy, and ambition. It is a period of starting a career and a family. It can also be a time of stress and tension as career and family are balanced. It is a period of balance between cognition and emotion, idealism and pragmatism, moral living and hedonism.

Disorders Of Adolescence and Youth

The problems of teenagers and adolescents are problems of a rapid transition. They arise as discordance between biological maturity on one hand and psychological and emotional maturity on the other. Other problems are delayed puberty, and precocious puberty, growth anomalies. Youths have a lot of energy which they may expend in harmful activities if they make wrong choices.

Middle Age, *sinn al rushd* 40-60

Definition Of Middle Age

Middle age is the period of full human growth and development defined as the age 40-60. The age of forty is the age of guidance. By the age of 40 a person's character and personality have stabilized. The age of 60 is the start of old age. It represents the completion of growth and development.

Characteristics Of The Middle Ages

Middle age is characterized by *rushd*, actualization, balance, caution, and completion of family and career. *Rushd* is the stage of complete wisdom and moral rectitude. Actualization is a stage of feeling of fulfillment. There is balance between intellect and wisdom; balance between impulse and caution; and balance between conservation or maintenance and innovation. By middle age there is a more cautious approach to life. Risks and reactions are weighed carefully before taking any drastic action. Because of physical and intellectual decline after middle age, no new major achievements or breakthroughs are expected. The end of middle age completes the family. For most people there are no more new children to look after. The older children are themselves becoming adults and setting up their own families.

Biological Aspects

Biological decline is progressive. Each person and each organ declines at a different rate. Tissue growth declines until the equilibrium between growth/repair and degeneration is tipped in favor of degeneration. Immunological response declines making the elderly more prone to infectious and neoplastic diseases. Sensory organs decline gradually decreasing the impact of environmental stimulation. Male testicular function declines but there is no male climacteric. Sexual difficulties are due to the associated diseases. In female menopause the ovary is not responsive to gonadotrophins so that the menstrual cycles disappear. Menopause like adolescence has many biological and psychological problems because it is a period of

transition. The post-menopausal syndrome consists of the physical symptoms of hot flushes as well as psychic changes. There is general decline in cognition and memory. The speed of intellectual processing is slower than in the youths. The incipient intellectual decline may not be easily noticed because of the compensatory effect of the accumulated wisdom and experience of middle age. Memory decline is more serious for short than long-term memory. Long-term memory is remarkably well preserved.

Psychological Aspects

Psychological balance predominates towards the end of middle age. There is psychological and emotional stability as a result of a conscious renunciation of the pursuit of material achievements. The middle aged has realized that there are things in life that will never be achieved. He also has learned to accept and live with his limitations and failures. He has the balanced view of the world in which he appreciates the successes and does not lose sleep over failures. Apart from depression that is common the middle aged does not suffer from major psychological or emotional crises. He is able to cope with the social or psychological stresses that he meets. The mid-life crisis is a major and drastic change in personality and behavior in a few people. It is more due to psychological than physical factors.

The mid-life crisis is due to the realization that many of the youthful ambitions will never be fulfilled. In a few persons it manifests as a return to more youthful behavior like promiscuity and seeking youthful entertainment. It also may manifest as an attempt to deny the onset of middle age. In females the mid-life crisis is intertwined with the onset of the climacteric. There are behavioral changes mediated by hormonal changes. There are also behavioral changes due to fear of old age and loss of sexual attractiveness.

Social Aspects

Late middle age is the last stage of family rearing. By this time children are either adolescents or are young adults. There are

still youth problems that the middle-aged parent may have to cope with. Late middle age is also a time of transfer of leadership to the new generation. The middle-aged parents must train their offspring and give them increasing responsibilities so that a smooth transition can be achieved without the problem of a 'generation gap'

Old Age, *shaykhukhat*, *kibr*, *haram*

Definition and Characteristics Of Old Age, Age 60-130

Ageing is a natural process. It is a long and variable process with much individual variation. Genetic, social, dietary, and disease factors determine the rate and extent of ageing. Old age has physical, social, and religious dimensions. Old age is associated with degeneration and decreased or deranged physiological function. It is not true that old age is illness. A practical definition of disease in the elderly must distinguish between the normal changes of aging and pathological conditions. Old age represents the close of the family cycle. It is also the period of maximum wisdom. The age of 60 is generally taken to be the start of old age. The proportion of the elderly in most human populations is increasing due to general socio-economic improvement and medical technology. The life span of each individual is fixed by Allah. No human effort or endeavor will alter the span. Longevity has always been a desirable objective of humans of all ages and all places. Longer life has advantages. There is more to contribute to society, to do good deeds to expiate for past failures. However the physical disabilities of old age reach a point when they outweigh the psychological and social advantages.

Physical Decline

The capacity for cell division declines with age. The reasons for this loss of division capacity are not known but it seems to be part of genetic programming. With age the following phenomena increase and their cumulative effects lead to ageing

or death of the cell: the cumulation of somatic mutations, error rates in protein synthesis, and failure of error-correcting mechanisms. The increase in these phenomena is due to cumulative environmental insults and decreasing ability of the aging body mechanisms to correct the errors. Aging, degeneration, and eventual death can be explained at the cellular level. Aging is accompanied by physical, psychological and social changes as well as challenges. There is no point in time when development ceases and degeneration starts. The two processes are contemporaneous. In advanced age degeneration becomes predominant. Normal aging is a gradual process of physical decline and degeneration. Aging affects the structure and function of all organs. Old age because of its multiple incapacities is sometimes not a pleasant period. Physical decline starts from the age of 30. There is functional decline in the performance of all organs of the body. The difference between the normal physiology of ageing and pathology is very fine. As people age, the quality of their life deteriorates. The elderly are dependent but very important members of society whose rights must be respected. It is a grave sin to neglect these rights.

Social And Psychological Aspects

A person is psychologically as old as he feels. An elderly person may feel young. The prophet mentioned that people stay young in 2 ways: love of the world and long hopes. Old age is unpleasant for several reasons. Physical incapacities reduce independence. Accumulated negative life experiences with no hope of returning and doing things again. Materialistic societies do not respect elders because it is felt that they are unproductive and are a burden on society. This is a major transgression. They were productive at a time and the new generation was at that time dependent children. Mistreatment of parents is a major sin. This covers parents of others. If you mistreat someone's parent someone else may mistreat your parents. The prophet spoke a lot about recognizing and respecting the rights of the elderly. The elderly have a legal

right of physical support by their offspring. The offspring must bear with patience any annoying demands from their parents.

Research On Ageing

Medical science has set itself an unrealistic objective of preventing aging. Research is carried out on causes of cellular aging and the effect of nutrition. The process of aging is one of Allah's sunan. It cannot be prevented but it can be made more pleasant such that growing old does not mean pain and suffering. The efforts of scientists should rather be directed to ensuring good physical health in old age.

Disorders Of Old Age

Listing the disorders of old age is like making a catalog of all subjects in the textbook of pathology. Anything that can go wrong is found to be wrong in the elderly because of their decreased ability to cope with environmental insults.

The Human Organism: Structure & Function

Jism al Insaan**The Biological Miracle, *mu'ujizat al hayaat***

- Perfection, Optimality, And Incomparability
- Control
- Homeostasis, *'itidal*
- Interaction With The Environment
- Immunological Processes
- Pathological Processes: Repair & Restoration Of Equilibrium, *Ruju Ila Al 'itidal*

Human Organ Systems

- The Alimentary System
- Uro-Genital And Cardio-Respiratory Systems
- Locomotor And Protective Systems
- The Sensory System
- The Nervous System

Perfection, Optimality, Incomparability**Concepts**

Allah's creation is perfect. Allah is the best creator, *ahsan al kahliqin* (2:138 & 37:125). He perfected everything He made, *kamal al khalq* (27:88 & 95:4). He made humans in the best image, *ahsan surat* (40:64 & 95:4). The process of perfection went through four stages: creation, *khalq*; making due proportions, *taswiyat*; balancing, *ta 'adil*; and making the best image, *taswiir*. The biological perfection was created and not evolved. Every living and non-living things was created perfect *de novo*. All what Allah created has a purpose (23:115). This applies to the whole organism or its constituent tissues and cells. Order, *nidhaam*; harmony; and perfection, *kamaal*, are part of predestination, *qadar*, and are not accidental. Denying the existence of a creator is an intellectual and mental aberration that is incompatible with logic because perfection and harmony could not arise by chance. The constant physical

laws, *sunan al kawn*, operate in both inanimate and biological systems. Every human is unique and is different from everybody else, a testimony to the power of the Creator. The human is created in the best and optimal fashion, *ahsana taqwim* (95:4) and all biological systems are optimal. Change is governed by natural laws, *sunan llah*. There is a balance between constancy and change. The Qur'an challenged humans and other creations to create the like of Allah's creation and proved them incapable of facing the challenge (7:191 & 25:35-36). Cloning, genetic engineering, and selective breeding are not *de novo* creations and can not be compared to Allah's creations. No human or any other being can create new life, *'ajz al shuraka 'an al khalq* (7:191 & 25:35-36). Human actions are imperfect.

Manifestations: Anatomy

Perfections of perfection and optimality are found in all medical disciplines. In anatomy, for example, parity in general (11:40 & 51:49), parity of gender (92:3 & 78:8), parity of organs (12:84 & 111:1), symmetry, both circular and lateral symmetry, laterality of left and right (7:17 & 84:7-8), adaptation of structure to function, consistency and predictability, and orderly change (staged, anticipated, and protective measures against mistakes).

Manifestations: Physiology and Biochemistry

Manifestations of perfection and optimality in physiology, biochemistry, & pharmacology are: the human organism functioning as a single entity (MB2018), correlation between anatomy and physiology, repeatability/replicability, specificity, specialization, complementarity, co-operation, a hierarchy of importance, information processing/perception, reserve capacity in organs and compensation for overload. The complex human organism has few basic building blocks: amino acids, monosaccharides, and fatty acids. The discovery of the periodic table of elements is one of the strong indicators that there is order in the universe. Metabolism of new synthetic molecules is a miracle of creation that needs appreciation. The

finding that synthetic molecules can be metabolized by the biological systems indicates the existence of a unifying scheme of creation based on *sunan al laahi fi al kawn*.

Manifestations: Biostatistics And Epidemiology

Manifestations of perfection and optimality in biostatistics and epidemiology are consistency & predictability, inference and causality, and probability.

Control

Control In Anatomy

There is centralized master control of physiological functions mediated by the pituitary gland, the hypothalamus, and the CNS. This control has a genetic basis in the form of DNA. DNA has 6×10^9 bits of information called codons. These represent 10^7 genes. Each gene codes for one protein molecule. Command and control in physiology relate very well to the concept of *tauhid*. For efficiency there must be a controlling center otherwise contradictions from many uncoordinated centers of control will lead to failure. An orderly and harmonious universe cannot have more than one master. Examples of control are the integrity of DNA despite continuous mitosis, normal cell growth, control of embryological development

Control In Physiology, Biochemistry

Examples of control are control of balance (fluids, electrolytes, iron, acid-base, heat energy, and temperature). There is balance between entropy (disorder) and order, between coagulation and fibrinolysis, between sympathetic and parasympathetic systems, between left and right brain hemispheres, between anabolism and catabolism. Chemical reactions tend to an equilibrium as defined in the Hasselbach-Henderson law. Phenomena of control manifest as control of the heart beat, control of vomiting, control of swallowing, control of coughing, control of gagging, control of posture, control of micturition, control of defecation, control of lactation, control

of parturition, control of cell membrane permeability, control of genetic expression, and control of hormonal receptors. Phenomena of periodicity manifest as cycling of matter between organic and inorganic and the circadian rhythm. Constancy and predictability are the basis for diagnostic tests and drug action.

Control In Pharmacology Control In Microbiology And Parasitology Control In Immunology Homeostasis, *i'tidal*

The Qur'anic Concept Of The Golden Mean

Four Qur'anic concepts relate to the golden mean: mizan, wasatiyah, tadhafu'u, and I'tidaal. Concept of mizan refers to balance. Concept of wasatiyyat refers to the center. Concept of tadhafu'u refers to action and reaction. The concept of i'tidal refers to equilibrium. There is equilibrium between the internal and external environments. Homeostasis restores the normal state once it has been disturbed. Tauhid is related to homeostasis. Tauhid implies that the whole cosmos and what it contains have one deliberate creator. The contents must relate to one another in some harmonious way. It is unthinkable that the one creator could create systems that are contradictory to one another. The harmony must however be looked at in a dynamic way. Because there are constant changes, there must arise from time to time contradictions in the state of flux. There must therefore exist mechanisms for restoring the status quo after the changes have been accomplished. Thus tauhid and homeostasis are closely related. Feed-back may be positive or negative. Negative feed-back operates in homeostasis deviations from the norm are detected by specialized sensors and compensatory changes are triggered to restore the status quo. Positive feed-back is a very dangerous concept. If a change occurs, positive feed-back will reinforce it in a cyclic way that causes more of the same until all homeostasis is lost. The base-line is not constant. It changes with the environment and time. Variation can be within the range of normality or outside the range of normality. Change may be temporary or

permanent. Sleep and fatigue are temporary. Lameness and blindness are permanent changes. The human body is in harmony with its internal and external milieu. The internal and milieu and the external milieu are themselves in harmony.

Cardio-Vascular Homeostasis

The control centers are in the spine, medulla oblongata, the cortex, or the chemoreceptors. The input is from baroreceptors, chemo-receptors, cerebellum, and cerebrum. The output is through the autonomic nervous system to the heart and blood vessels. The hormonal factors involved are autocoids, adrenal medulla catecholamines, adrenal cortical hormones, and vasopressin. Oxygen and carbon dioxide have a direct effect on the smooth muscles of the pre-capillary sphincters of arterioles. Kidney auto-regulation also keeps blood flow at a constant rate. The integrated control of cardiac output depends: sympathetics, catecholamines, and increased venous return.

Renal Excretory Homeostasis:

The kidney maintains plasma osmolality by ultra filtration followed by selective tubular reabsorption.

Respiratory Homeostasis

Neural and chemical mediators are involved in respiratory control. The respiratory rate is controlled by the respiratory center, stretch receptors in the lungs, peripheral chemoreceptors, and central chemo-receptors. The diaphragm and the intercostals are responsible for respiratory movements.

GIT Homeostasis

There is balance of glucose, lipids, and nitrogen. Glucose is the final pathway of carbohydrate metabolism. The level of glucose in the blood is finely controlled. Glucose balance depends on dietary intake, rate of entry into cells, and the homeostatic activity of the liver. There is a balance among glycolysis, gluconeogenesis, and glycogenolysis. The level of free plasma fatty acids is finely controlled. It is increased by lipolysis. It is decreased by incorporation into lipoproteins,

binding to albumin, and deposit as triglycerides. Plasma cholesterol is also kept in balance. It is increased by dietary intake, liver synthesis through a negative feed-back control, and breakdown of lipid stores. It is removed through feces and bile salts. Intake of nitrogen is dietary. The output is by excretion is in the form of excretion as urea and ammonia; about 80% of the ingested nitrogen is excreted as urea.

Interaction With The Environment

Concepts

The miracle of the human body is more startling when seen in its interaction with the environment. The interaction between the internal and external environments is purposive and is not a product of chance. The nervous and endocrine system ensure that the human body can adjust to rapidly changing circumstances of the external environment. This even includes changes on anticipation of external changes. The interaction between humans and their external and internal environments is part of Allah's grand design and is not by mistake. This implies that this interaction has to be harmonious and follows the laws of Allah *sunan llah fi al kawn*. The human body is programmed to interact with the environment in the most efficient way. However humans because of their free will can behave in ways that produce unhealthy interactions. There are some phenomena like disease or drought that may bring adversity to humans. These are part of the grand design to ensure that there are checks and balances in the eco-system that ensure equilibrium. The adversities are therefore not created for punishment of humans. The universe was placed under the humans (*taskhir*). They control and change it as they want. However this control is sometimes not proper resulting into imbalances and problems. The crucial question is to determine what changes are bad because they derange the permanent fixed laws of nature, *al sunan*. A decision must also be made on what changes must be made for purposes of building a civilization.

The Physical Environment

The human body is able to adapt to all types of physical environments. Human eucaryotic cells are less dependent on the external chemical environment than pro-karyotic cells. They have in a way created their own environment in their internal environment. Human can change environment. Some of the changes are for the good of the eco-system while some others are definitely harmful. Humans can sustain injury from the environment.

The Biological Environment

The biological environment consists of parasites, animals, and plants. Humans and parasites have evolved a mutual adaptation. This takes several forms: symbiosis, commensalism, and parasitism. Parasites undergo antigenic change to avoid host immune defences. Plants are a source of food. They are involved in the oxygen, carbon dioxide, and nitrogen cycles that are necessary for human comfort. Humans are able to eat some plants or parts of plants for which they have the appropriate digestive enzymes. Plants or parts of plants indigestible by humans still provide human food by being eaten by herbivorous. Under the concept of *taskhiir*, the earth and its contents were put at the disposal of humans. *Taskhiir* has its limitations based on the need to establish balance and equilibrium in the eco-system and protect humans from harm. Animals and plants are a source of food. Humans are at the top of the food chain and all food webs.

Microbiological Environment

Micro organisms are viruses, prokaryotes, and eukaryotes. Viruses are the smallest infective agents and are obligate intracellular parasites that depend on the host for survival. In prokaryotes DNA is not bound in a membrane and there is no separation between the nucleus and the cytoplasm. Bacteria, spirochetes, mycoplasmas, and rickettsiae are prokaryotes. Eukaryotes have their DNA separated from the cytoplasm. Protozoa, fungi, helminthes, arthropods are eukaryotes. There are 3 basic types of host-parasite relations: symbiosis,

parasitism, and commensalism. Vectors transport parasites in disease causation. Parasites have to overcome host resistance and barriers before disease causation. There is a balance sheet between the benefits and harm of microorganisms. There are many Islamic teachings about avoiding infections.

Chemical Environment

Water is 45-75% of body weight. Tissues consist of inorganic substances, carbohydrates, lipids, and proteins. Elements higher concentration in humans than earth are H, C, and I. Elements the same concentration in humans and human body and the earth are P, S, Cl, K, and Ca. Humans take elements from the earth as food, drink and through respiration. C is the basis of organic compounds. Humans do not release dangerous chemicals into the environment eg ammonia is detoxified and turned into urea. Humans have complicated the simple chemical environment bequeathed to them by producing new chemicals.

Pathological Processes: repair & restoration of equilibrium, *ruju ila al i'tidal* The Alimentary System, *maidat*

Food As Rizq

Food is needed for energy, growth, repair, and maintenance of the body. The Qur'anic term *rizq* means sustenance. It refers to food useful to the body. *Rizq* is from Allah alone and He provides for all. The alimentary canal is a tube outside the body in direct contact with the external environment. Some food ingested at the mouth exits at the anus without entering the body. Digested food is absorbed by the intestines to enter the internal environment. The alimentary canal has a role in balancing the internal and external environments. It takes material from the environment, processes it, and returns it to the environment. Human appetite for food (a requirement for survival) is so strong that prayer is delayed when food is presented. Nutritional habits reflect underlying visions, beliefs,

and cultural experiences. The alimentary system can be looked at as the final pathway for human corruption because food security is the underlying but often unstated purpose behind crime, corruption, treachery, amassing of wealth, aggression, and many other transgressions. Believer eat to get energy for '*ibadat*; non-believers may eat for enjoyment or to get energy for evil. A believer is satisfied with less food than a non-believer. The search for food and its ingestion is part of '*ibadat*. The human is rewarded for efforts to feed himself or herself. The '*ibadat* aspect is emphasized by the fact the feeding starts with the *basmalah* and end with the *hamd*. Fasting of Ramadhan is one the major acts of obligatory physical *ibadat*. It serves the functions of cleansing and protecting the body.

Digestion And Absorption

Digestion takes place in the mouth, the stomach, and the intestines. The prophet taught measures to prevent oral infections: rinsing the mouth after a meal and use of the toothpick. He taught stopping to breathe during drinking because of deglutition apnea. The Qur'anic term *batn* refers to the whole gastro-intestinal tract or the whole internal cavity and not only the anatomical stomach. Humans have to eat at intervals because of limited internal food storage. The limited storage enables them to engage in *ibadat* and other activities of human civilization without having to eat continuously. Besides its digestive function, the stomach acts to warn humans of impending starvation by its hunger pangs. The Qur'an mentioned the intestine as being destroyed by bad food.

Elimination

The alimentary system separates the nutritious food to be absorbed from the non-nutritious one to be eliminated as waste. It protects the environment by detoxifying ingested toxins or detoxifying metabolic products before elimination into the ecosystem. Feces are considered filth (*najasad*) largely because of their content of infective and toxic material. Proper disposal

of excreta at both the individual and community levels is a mark of civilizational development. Islam started with a revolution in hygiene by teaching proper toilet etiquette and cleaning with water in both *wudhu* and *ghusl*. Hygiene is a prerequisite for many humans to live together (civilized existence) because it prevents infectious and toxic disease.

Metabolism

The complex human food in all its varieties is in the final analysis reduced to a few chemical compounds after digestion (amino acids, glucose, and fatty acids). They are all finally reduced to Acetyl CoA that enters the Krebs cycle. The main purpose of the metabolic processes is to generate energy from food. The liver is the chemical intermediary between the alimentary system and the rest of the body. It is responsible for maintenance of the body's chemical and metabolic homeostasis. It is the great factory involved in both anabolism and catabolism. The liver is also the great protector of the body by detoxifying toxic substances from the alimentary tract.

GIT and Nutritional Disorders

The diseases of over-nutrition are obesity, diabetes mellitus, ischemic heart disease, and atherosclerosis. The prophet taught the rule of the thirds as a guide for food intake: one third for solid food, one third for water, and one third empty (Musnad Ahmad). He taught that Muslims do not eat until they are hungry and when they eat they do not fill their belly. Ibn al Qayim defined three levels of food: necessary, *hajat*, sufficient, *kifayat*, and excess, *fadhlat*. The necessary is for maintenance of life and health. The sufficient is for psychological satisfaction. The excess is harmful. Obesity is a result of excessive intake without matching physical exercise. In a hadith reported by Aisha, the prophet described obesity as one of the signs of social degradation.

Uro-Genital & Cardio-Respiratory Systems

Excretory System, *jihaz bawli*

The excretory system consists of the kidneys, ureters, bladder, and urethra. The system forms and voids urine and ensures fluid and electrolyte balance. It ensures homeostatic control of the body by controlling and maintaining the volume, pH, and ionic composition of plasma. The kidney is the most important organ in homeostasis fulfilling the physical laws, *sunan al kawn*, relating to equilibrium and balance, *tawazun & i'itidaal*. Urine is filth, *najasad*. The Law teaches the importance of avoiding being soiled by urine and teaches measures to safeguard against urine. Washing of hands and the external excretory organs is required after urination. The use of the right hand is forbidden. Urine of breast-feeding infants is treated differently from that of adults in washing. The urine of female infants is also treated differently from that of males. Urination on the street or public places is forbidden.

Genital System, *jihaz tanasuli*

The Qur'anic term *farj* is used to refer to the external genitalia of both males and females. External genitalia must be private and are considered part of *'awrat*. The uterus, *rahim*, had special mention in the Qur'an as the abode of the fetus. Fertilization and growth inside the uterus increase chances of survival of human fetii compared to frogs and fish whose ova are fertilized and grow outside and birds whose fetii grow partially inside. Female reproductive physiology manifests predictable cyclicity that is one of the signs of Allah, *ayaat al llaah*. The ovarian, menstrual, uterine, and vaginal cycles recur every month for 30-40 years of the woman's life and are closely related to the human reproductive function. The menstrual flow lasts a few days and recurs in a cycle of 28 days on average. The menstrual cycle manifests one of the *sunan* of Allah because its duration of 28 days is the same as the duration of the lunar cycle. Menstruation is a normal process at the end of each ovarian cycle. Unlike Yahudiyyat, Islam does not make a menstruating woman a social outcast. Menstruation

is a cause of physiological stress therefore fasting or prayers are excused. Copulation is a source of physical pleasure but has a deliberate reproductive function that is considered one of the Purposes of the Law, *maqasid al shari'at*. The Qur'anic term *nutfat* or *mani* refers to the male and female gametes that are the spermatozoa and ova respectively. Sex determination is not random but is determined by Allah. Sexual identity is a result of biology and socialization. Some deviant cultures encourage people of one gender to behave like those of another gender contrary to the teachings of Islam that emphasize very strong gender identity and a sharp demarcation between males and females. There are severe punishments for feminine men, *al mukhanathin*, and masculine females, *mutarajilaat*. Homosexuality is also severely punished.

The Heart

The Qur'anic term *qalb* is not used in an anatomical sense. The heart is a pump that provides the energy to drive blood through the circulatory system. Parity of the heart is understandable from the embryological point of view. Separation of the left and right hearts ensures supply of well-oxygenated blood to the tissues. Control of the heart rate is by the electrical conduction system.

The Blood Circulatory System

The prophet mentioned the flow of blood inside the body. Ibn Nafees was the first to describe circulation centuries before European writers. The circulatory system is an illustration of the *sunan* of equilibrium and control. Blood circulation follows biophysical principles and is another illustration of the unity of creation because physical and biological phenomena follow the same laws, *sunan al kawn*. The efficiency of the heart's energy conversion is 20%, better than many machines. Blood flow to the skin increases in hot temperature to release heat. During digestion more blood flows into the GIT. During exercise cardiac output increases ten-fold and work done by the heart can increase 500-fold.

Respiratory System

The Qur'an mentioned the chest, *sadr* but not as an organ of respiration. The lungs are the main organs of respiration. The lungs provide a big opportunity for exchange between the internal and external environments. The term respiration can be used in 2 different ways to mean ventilation or tissue respiration. Coughing and sneezing expel irritants. In coughing the glottis is closed raising intra-ductal pressure to 100mm of mercury. When the glottis is opened suddenly, a jet of air under high pressure is released accompanied by the familiar sound of coughing. The glottis is not closed in sneezing but pressure still builds up. Sneezing is from Allah. Sneezing in *salat* is from *shaitan*. The prophet taught the etiquette of sneezing and yawning. The sneezer should praise Allah. It is obligatory for those present to respond to the sneezer. Respiratory movements have been used over the millennia as indicators of life. The Qur'an describes the last moments as *sakrat al mawt* as respiration begins to fail.

Locomotor And Protective Systems

Locomotor/Musculo-Skeletal System, 'idhaam & 'adhalaat

The skeleton has three main functions of support, movement, and protection. It was mentioned in the Qur'an as bones, *'adhm*. Muscles are mentioned in the Qur'an as meat, *lahm*. Organs are used for worship, work, aggression, and sinning. Wudhu involves washing exposed organs of the body: the face, hands, forearm, leg, ear, mouth, nose, and hair. The upper limb is for manipulation and is specialized for manual dexterity. The lower limb is for posture and mobility and is specialized for weight bearing and walking. The sophisticated human hand is responsible for the advanced human civilization by making tools. The upper and forearms are levers to position the hand. The human upright posture allows use of upper limb free for manipulation. Control of posture and movement in humans is very advanced to enable upright walking. The musculo-skeletal

system act as levers and pulleys with a mechanical efficiency higher than that of man-made machines. Continuous movement and exercise of the musculo-skeletal system is a physiological necessity for growth in infants and to prevent disuse atrophy. *Salat* is physical exercise repeated five times a day. The Prophet engaged in physical exercise and Omar Ibn al Khattab encouraged physical sports. Physical exercise is best undertaken while doing some work that is useful for the community. The human facial muscles are used in both verbal and non-verbal communication. Body language and body posture can convey very sophisticated messages and emotions. The vocal apparatus, the mouth, the tongue, pharynx, and the larynx, help in producing noises that may be happiness, anger, or fear. They also produce words that have enabled humans have the most sophisticated language and enable recitation of the Qur'an in a sweet voice.

Surfaces And Membranes

The Qur'an described skin as a site of punishment because of the sensory function. It also described psychological and physiological reaction of the skin to mention of the name of Allah. The skin will on the last day bear witness because it is used in sinful activities. The functions of the skin are: protection against mechanical injury, excretion through sweat, sensory input, temperature regulation, immune protection, protection against UV rays. Skin color is controlled by 4 pairs of genes. Chemically and optically, it is the melanin in the epidermis and the blood vessels in the dermis that define skin color. The density of melanocytes in the skin does not differ between darker and lighter races. Darker races have more active melanin production than lighter races. The primary purpose of melanin is to protect the skin against cosmic radiation especially ultra-violet radiation. Skin whorls and patterns are unique for each individual. The probability of two individuals having the same pattern is very low. Serous membranes allow smooth movement of organs and play a role in immune protection. Human nails unlike those of animals do

not play a significant role in self-defense against attack. They are however used to scratch the skin and to improve grip for some small objects. Tears, sweat, and sebum play non roles in non specific immune protection. The number, size, and depth of melanin particles determine the color of hair from black to blonde. White hair has no melanin. Red hair has iron-rich pigment. Straightness and curliness of hair of hair depend on the shape of the pit of the follicle (straight sharply curved) or shape of hair shaft (round or oval). The pattern of baldness is under genetic control. Hair is part of female beauty.

The Endocrine System

Functions of hormones are morphogenesis, hemostasis, metabolic regulation, and functional integration. The human hormonal system plays a major part in the flight/fight preparation. Modern sedentary humans have the same hormonal reactions as ancient hunters but do not face the same physical stresses and risks. The hormonal cascade refers to the chain of command and control with ultimate central control in the hypothalamus. The flow of information is as follows: environmental signal, CNS, limbic system, hypothalamus, anterior pituitary, target organ, ultimate hormone, and systemic effects. The final hormone acts by negative feed-back on the hypothalamus, pituitary, and even the central nervous system.

The Immune Defense System

Immune defense is recognition and elimination on non-self (foreign) material. Immune defense may be cellular or humoral. Psycho-neuroimmunological research is uncovering what empirical observation has always shown that psychological factors such as stress affect susceptibility to disease.

Hemostasis

The Qur'an mentioned blood as *ddam*. The chief function of blood is transport. It is also a buffer. The purpose of the hemostatic system is to maintain the integrity of the closed circulatory system in case of vessel rupture.

The Sensory System

Vision

Vision is physical or moral. The eye is the organ of vision and emotional expression (sadness, pleasure, beauty, communication). Light is a condition for sight. The sources of light are the sun, the moon, the stars, and lamps. Darkness is either physical or moral. Human vision is limited, can be deceived by a mirage, and has poor speed and size discrimination. Blindness can be moral or physical.

Hearing

The ear is an organ of hearing. Biaural hearing is a bounty from Allah enabling humans to judge distance. Deafness can be physical or moral.

Chemical Sensation

Human smell and taste are weak. Odors may be pleasant or unpleasant. Smell and taste of food are appetizing, stimulates salivary and gastric secretions. Humans cannot smell out enemies but can smell or taste dangerous and discard harmful substances. The poor food discrimination of babies due to poor smell and taste enables them to like a wide range of food. Poor human smell is a bounty because they are spared many bad odors in the environment. Chemical sensations by chemoreceptors and osmoreceptors are useful in homeostasis.

Surface Sensation

The Qur'an mentioned touch as *lams* or *mass*. The skin is a sensory organ. The hand is a sense organ that feels size, shape, and texture. The tactile ability of the hand is the basis of human civilization because it enables manufacture and use of tools. Touch can also be used to show love and intimacy. Earthly pain is less severe than pain in the hereafter. Somatic pain is a bounty for humans as an early warning of tissue injury. It is Allah's bounty that most visceral pain is not felt. Heat is a punishment in the hereafter, and a discomfort on earth. It is Allah's bounty to protect humans from heat by clouds and

shades. Cold is the opposite of heat. Cooling rain water and cold drinking water are bounties of Allah. Hunger and thirst can be physiological, psychological, and moral. They are a warning to replenish food stocks before depletion and do not always indicate immediate danger or pathology. Diabetes mellitus is associated with hunger and diabetes insipidus is associated with thirst. Moral hunger manifests as loss of control of appetite and not getting satisfied. Hunger is a test and a punishment. There will be no hunger in jannat. The food of the dwellers of hell does not cure or satisfy hunger.

Other Sensory Modalities

It is Allah's bounty that humans are not consciously aware of visceral, kinesthetic or proprioceptive sensation otherwise they would be overwhelmed by information. Allah wanted humans to concentrate on sensory input from the external and not the internal environment. The Qur'an and *sunnat* have described phenomena of extra-sensory perception (ESP) as inspiration, *ilhaam*; intuition, *hadās*; instincts, *jibillat*; and imagination, *khiyaal*; telepathy; dreams; and revelation. Scientific understanding of ESP is limited. Only dreams of prophets are true. The Qur'an and *sunnat* have condemned astrology, foretelling, divination, and sorcery.

The Nervous System

Qur'anic Concepts Relating To The Nervous System

The Qur'an mentioned the functions of the nervous system (thought, memory, forgetting, and emotions) in association with 4 Qur'anic phenomena (*naasiyat*, *lubb*, *qalb/nafs*, *fuaad*, and *dhihn*). Humans have freedom of action on a limited scale.

Structure and Function Of The Nervous System

The nervous system consists of the central and peripheral nervous systems. Most physiological functions are autonomic not under conscious cortical control. Human behavior can be explained by the *nafs*, organic factors (chemical and anatomical), early learning, early conditioning, and

socialization. Genetically-determined organic factors of behavior do not excuse humans from accountability because the *nafs* can override organic factors. Diet and environmental factors may also affect behavior. Humans can artificially change their behavior by using chemicals and intoxicants.

The Intellectual Function, 'aql

Intellect, 'aql, includes conceptualisation and categorization, measuring and counting, concrete and abstract thought, causal reasoning, and problem solving. It cannot reason out all moral issues without guidance from revelation. It is very creative and imaginative. It is the basis of judgment (reconciling apparently contradictory information). It is needed for sensory perception. It is needed for acquisition of knowledge. It is related to observation. The 3 main intellectual processes are understanding, *fahm*; insight, *idraak*; and judgment, *hukm*. Consciousness, *shu'ur*, is both physical (awareness of the environment) and moral (sensitivity to immoralities in the community). Learning is related to memory and language. Humans think by manipulating verbal symbols. Communication is the basis for growth of civilization, family and social functioning, problem solving, and acquisition of new knowledge. The disorders of the intellect are *kufur*, *shirk*, *junuun*, *jahal*, and thought disorders (sterile argumentation, doubt, self-delusion, and conjecture).

Memory Functions, *dhhakirat*, *hifdh*

Humans are capable of great memory but the capacity is not fully used. Short-term memory is recollection of recent events. Long-term is persistent recollection of distant events. Implicit memory is involved skills such as driving, eating, and drinking. There is a neurological basis for memory. Memory capacity can be enhanced by dua, strong motivation, and repetition. Memory can suffer from decay, distortion, confabulation, moral forgetting and physical forgetting. Shaitan is the cause of forgetting, moral and physical. Forgetting as a type of negligence cured by remembrance of Allah, *dhikr Allah*. Humans are not punished for forgetting. Reminding in a moral sense and the physical sense helps humans remember.

The Emotional Function

The qalb is the seat of emotions. Its emotional states can be expansion, *inshiraah*; stress, *dhiiq*; and calmness, *tama'animat*. The basic animal drives are hunger, thirst, sex, self-protection & security, sociability, and inner promptings of the nafs. The food and sex drives are the strongest and both are necessary for survival of the human species. Humans have drives more and above the animal drives described above: honor, *sharaf*; altruism, *iithhar*, faith, *iman*, consciousness of Allah, *taqwah*, seeking the pleasure of Allah, *ridhallah*; seeking knowledge, *talab al 'ilm*; appreciation of esthetic beauty, and self-actualization. Drives are inside and emotions are their external manifestations. Satisfaction of drives is associated with pleasant emotions. Dissatisfaction of drives is associated with unpleasant emotions. Drives cannot be denied or abolished but have to be controlled and channeled. Pleasant emotions are love, hope, elation, tranquility, mercifulness, and empathy. Unpleasant emotions are fear, rage, aggression, enmity, hate, *hamm & ghamm*, sadness, despair, laziness, and jealousy. Stress is tightness of the chest, *dhiiq al sadr* and stressful life, *maishat dhankat*. The opposite of stress is *inshiraah al sadr*. Stress involves psychological stress, *dhiiq nafsi*. Stressful events are traumatic, uncontrollable, and unpredictable. It is part of human nature to be impatient and thus when confronted by a problem that cannot be resolved quickly they become stressed. Life is full of difficulties, '*usr*. Allah helps those in difficulty. He causes difficulty to be removed by ease. Each difficulty, '*usr*, is accompanied by what makes it easy, *yusr*. Patience is called for in moments of difficulty. Psychological reactions to stress are anxiety, anger, aggression, apathy and depression, cognitive impairment. The physiological reaction to stress manifests as the usual signs of adrenaline releases. Long-term stress affects good health. Emotional immaturity is basically refusal to accept and deal with emotions in a balanced way. Emotional disorders lead to behavioral dysfunction and social dysfunction.

Activities of Normal Living

Fiqh al 'Aadaat

Reproduction, *izdiyaad*

- Menstruation
- Human Sexuality
- Pregnancy, *haml*
- Delivery, *wadhau al haml*
- Breast-Feeding, *ridha'a*

Activities Of Normal Living, *'aadaat al ma'ishat*

- Hygiene
- Foods, *at 'imat*
- Drinks, *ashribat*
- Activity, *nashaat*
- Sleep and Rest

Menstruation

Physiology

Menarche, is a sign of adulthood. The minimum legal age at menarche is 9 years; there is no maximum set by the Law. The physiological events of the menstrual cycle are tightly controlled and coordinated by the hypothalamus-pituitary-ovary axis. The menstrual cycle is one lunar month on the average. The length of the cycle varies from woman to woman and even varies in the same woman from month to month. The Law sets 1 day as the minimum duration of the menstrual flow. If the menstrual flow is less than 24 hours, prayers missed in that time have to be repeated because that flow is not recognized as menstruation. For purposes of the Law, the usual length of the flow for a particular woman is considered her period, 'aadaat. However if the length of the flow is less than the usual period, she bathes, prays, and fasts without waiting for completion of the usual duration. The minimal interval of purity, inter-menstrual period, recognized by the Law is 15 days.

Normal Menstruation

Menstruation is natural and is not a disease. A menstruating woman carries on her normal life with minimal restrictions. She can enter the ka 'aba and walk through the mosque but not sit down. She can do anything with her husband except vaginal coitus. Coitus is forbidden during the period between cessation of the menstrual flow and ritual bathing. Menstruation is a distress. A menstruating woman is exempted from obligatory prayers and saum. She makes up missed saum but not missed salat. She attends eid salat but does not pray. She cannot touch or read the Qur 'an but she can listen to it with no obligation to make *sujuud al tilawat*. She is allowed to read or recite dua and other writings that contain Qur'anic verses as long as the intention is not reciting the Qur'an itself. The use of hormones to regulate the menstrual period in order to be able to complete the rituals of pilgrimage is widely used. A menstruating woman cannot perform circumbulation, *tawaaf*, or the trotting, *sa'ay*, between safa and marwa. A bath, *ghusl*, is required at the end of the menstrual flow. This bath has both hygienic and ritual aspects and *tayammum* can be sufficient when no water is available. The menstrual cycle is used to determine the length of the post-divorce waiting period, *iddat al talaaq*, as well as the waiting period after death of a husband, *iddat al maut*. There are disputes among the jurists whether the period is 3 months, three menstruations, or three inter-menstrual periods, *quruu/tahuuraat*.

Pre-Menstrual Syndrome (PMS)

PMS has been implicated as a factor in mental disorders, irritability, child abuse, alcohol abuse, and depression. *Salat* may not be possible in severe forms of PMS but must be made up later. PMS can be used as a court defense in mitigation of crimes committed while in an irritable and tense mental state. It is also used as an argument for diminished legal competence, *ahliyyat*, in civil transactions by women. Loss of interest in sex may create stress in marital relations. This is one additional justification for prohibition of divorce during menstruation.

Menopause, *ya'isu mina al haidh*

Climacteric changes are related to ageing and estrogen depletion. The climacteric is a period of transition and is associated with problems and complications. Menopause is permanent cessation of menses and is considered part of the climacteric. The age at menopause has been rising in countries and societies where nutrition and health have been improving. Among the manifestations of menopause are: vasomotor flushes, osteoporosis, genito-urinary atrophy (vagina, urethra, and bladder), and cardiovascular disorders (MI, CVA). The postmenopausal syndrome is due to deficiency of estrogen. It is a cause of distress, anxiety, behavioral, and physical disorders. Problems of the menopause include bleeding disorders and mood changes. Early menopause can be induced medically or surgically if there is a *dharurat*. Artificial delay of menopause to prolong reproductive life or strengthen marriage is praiseworthy. It is offensive if done for purposes of appearing young to the general society. Estrogen replacement therapy (ERT) can alleviate virtually all menopausal symptoms. ERT has serious side effects that have to be considered under the two principles of benefit and harm.

Menstrual Disorders

The Qur'an describes menstruation as an annoyance, *adha*. It is associated with impaired immunity, susceptibility to vaginal infection, and psychological stress. Menorrhagia is excessive menstrual flow that requires extra care with hygiene if mosque entry is contemplated. The Law considers 15 days the maximum duration of the menstrual flow. Salat and other acts of *ibadat* are resumed if the flow continues beyond 15 days. Prolonged bleeding, *istihadhah*, is not considered menstruation. Intermittent vaginal discharge is not a problem. DUB does not stop the woman from salat or fasting. It is treated as urinary incontinence. The woman washes her vagina and perineum, pads herself, makes wudhu and prays immediately to try to avoid being caught by more bleeding. Sexual relations are allowed in DUB unless there is a medical contra-indication. The severe pain of dysmenorrhoea may interfere with *ibadat* and civil obligations.

Human Sexuality

Gender Identity

Allah created 2 different and distinct genders as a pair and from the same source. Each gender should maintain its biological, psychological, emotional, and social identity. The man and the woman complement one another. Gender awareness develops in children but sexual awareness develops towards puberty. Socialization also plays a role in strengthening gender awareness. Gender separation has been used in a wrong way to discriminate against women on the basis of their gender in both ancient and modern communities. Islam emphasizes gender identity while rejecting all forms of gender-based discrimination. The law equalizes the guilt and their punishment of men and women. It also equalizes the reward for good work. The Law prohibits trans-sexual dressing, talking, behaving, and socializing.

Expression Of Human Sexuality

Sexual desire, *shahwat*, is a normal and is satisfied legally only through marriage. Islam forbids complete rejection and suppression of the sexual instinct. Allah has created in each gender features that attract the other gender. *Shaitan* exploits the sexual attraction between the genders to inflame passions that lead to sexual transgression. Human sexual attraction is enhanced by clothes, perfume, dyeing the hair etc.

Regulation Of Human Sexuality

The law regulates sexual relations. Severe punishment is imposed for illegal sexual relations. Saum can control sexual desire. Modesty, *haya*, is an inner spiritual protective device that makes a person shun sin and what may lead to it. Society's revulsion to sexual impropriety is a psychological barrier to zina. Open broadcast of sexual misbehavior, *fahishat* as well as false accusation of marital infidelity, *al qadhaf*, create tolerance for promiscuity. Those who commit zina are not allowed to marry the chaste and their evidence is rejected. The following measures against antecedents of zina are prescribed by the Law: covering nakedness, *satr al awrat*; prohibition of seclusion, *khalwat*; prohibition of free

mixing of the genders, *ikhtilat*; and prohibition of sexual display, *tabarruj*; and respecting the privacy of the home, *hurmat al bayt*.

Human Sexuality And Marriage

Marriage is a natural human institution that protects against sexual immorality. Desire for sexual satisfaction is a major reason for marriage. Sexual attractiveness is a continuous process that is necessary to bind the 2 spouses together. The sexual relation in marriage is wider than coitus. It involves social and psychological bonding. The husband and wife have to be close physically, psychologically and emotionally. The sexual relation is private not to be disclosed to third parties. Protection of chastity, *ghiiirat*, is a drive in the spouse and other members of the family to protect the chastity of both males and females. Marriage is a permanent institution, *abadiyyat al zawaaj*, and cannot be a temporary sexual relationship. Four temporary sexual relations are forbidden: temporary marriage, *mut'at*; prostitution, *bighaa*; adultery between consenting adults, *zina*; and marriage with the hidden intention to divorce after a time, *zawaaj bi niyyat al talaq*. Prohibition of marriage with close relations, *maharim*, ensures social intercourse within the extended family without fear of sexual transgression.

Coitus

Coitus serves 2 purposes: reproduction and sexual enjoyment. Marriage is annulled when coitus is physically impossible and there is no hope for a medical or surgical solution. Both husband and wife have rights to sexual satisfaction. Coitus is an act of love and not mere physical satisfaction. It should be approached with that end in mind. Foreplay is a sunnat and it allows both parties to be psychologically and physiologically prepared. Coitus interruptus (*'azl*) is permitted but cannot be done without the permission of the wife. Any coital position is allowed as long as coitus is vaginal. Vaginal coitus from the back is allowed. Anal intercourse is forbidden with both women and men. Homosexuality, *liwaat*, and lesbianism, *sihaaq*, are major sins and are forbidden. Wudhu between copulations is recommended. Bath, *ghusl*, after intercourse is

obligatory. Coitus is forbidden during menstruation, post natal or post abortal bleeding, during daytime when in saum, during the period of *ihram* in *hajj*, and in the mosque. Coitus is permissible during lactation. The following acts are forbidden while in sexual ritual impurity, *janabat*: reciting the Qur'an, *salat*, and *tawaaf*,

Pregnancy, *haml*

Diagnosis Of Pregnancy

The Qur'an mentioned pregnancy, *haml*. The traditional diagnosis of pregnancy was based on amenorrhoea, signs and symptoms of pregnancy, and abdominal enlargement in the late stages. Earlier diagnosis of pregnancy based on hormonal and radiological procedures is now available. This earlier diagnosis cannot lead us to shortening the post-divorce period of waiting, *iddat al talaq*. We know that the material reason, *illat*, for waiting three months is to ensure that the wife is not pregnant. We however do not know the wisdom, *hikmat*, behind the ordaining of *iddat*. Any vaginal bleeding during pregnancy is treated as DUB and is not a reason for stopping *salat* or *saum*.

Period Of Gestation

Legal situations arise in which the court must reach a decision based on knowledge of the minimum and maximum periods of gestation. These include delivery after divorce with disputed parenthood and accusation of *zina*. Bleeding or spotting in early pregnancy that is thought to be an abortion or a menstruation can be the cause of the confusion in computing the period of gestation. The early jurists using medical knowledge available in their times had reached conclusions about the minimum and maximum durations of gestation. The ancient *ulama* had set the minimum period for gestation as 6 months based on their interpretation of 2 verses of the Qur'an. The verse in surat al ahaqaaf defined the period of pregnancy and breastfeeding as 30 months. The verse in surat baqara defined the period of breast feeding as 2 years. By subtraction the minimum period of gestation is therefore 6 months. The legal minimum period of gestation is getting shorter because

pre-mature babies can now survive due to advanced medical technology. There is a need to review the legal minimum duration of pregnancy in view of modern medical knowledge and the availability of sophisticated diagnostic procedures.

Physical Acts Of *ibadat*

Standing up, *qiyaam*; bowing, *ruku*; prostration, *sujud*, and sitting down in salat may be difficult for a woman in advanced pregnancy. It may also be difficult for her to put her hands on her abdomen. Bleeding in early pregnancy and the bleeding of threatened abortion are not considered *haidh*. Post abortal bleeding is considered *nifaas*. A pregnant woman may be excused from fasting. If the excuse is based on fear of nutritional deficiency in the mother or in both the mother and the fetus, the missed fasting must be made up. If the exemption is based on fear of harm to the fetus alone, expiation is by feeding the poor. The hustles of movement in *hajj* may be too strenuous for a pregnant woman

Other Physical Activities In Pregnancy

A woman in advanced pregnancy has limited ability to do physical work, at home or outside the home, and has to be excused. Sexual intercourse is physically cumbersome in advanced pregnancy. It may also introduce infections in the birth canal. In the rare instance of placenta previa it may provoke potentially fatal bleeding. There is no ruling against breast-feeding in pregnancy. It is a medical necessity since breast milk is the best food for a baby.

Legal Proceedings In Pregnancy

A pregnant woman can be divorced but cannot be forced out of her house until after delivery. Legal punishments, *hudud*, cannot be carried out in pregnancy until after delivery and suckling of the baby.

Delivery, *wadhau al haml*

Birth Process

The Qur'an mentioned childbirth, *wilaadat*. The birth of Isa (PBUH) was described in detail. The sunnah also described

several cases of birth. The physiology of parturition especially its trigger are not fully understood. The delivery process has many risks for the mother and the infant. We learn about the etiquette of delivery from the sunnah.

Taharat During Labor And Delivery

Amniotic fluid escapes early in the birth process. It is a sterile fluid that may contain varying amounts of meconium. It is not considered najasat and does not nullify wudhu. The show contains blood and nullifies wudhu. Complete wudhu may not be possible during labor. The mother can do as much as she can and perform tayammum. Ghusl is recommended at the end of birth. The obstetrician is not obliged to make wudhu or ghusl because of delivering a baby all that is needed is to wash blood from the clothes and the body. However wudhu is nullified by touching the vagina during delivery.

23.4.3 Ibadat During Labor And Delivery

Salat is not physically possible in the advanced stages of labor and immediately after delivery. Saum in labor is not recommended. Physical activities of hajj are not recommended in advanced pregnancy.

Post-Partum Bleeding, *nifaas*

Any vaginal bleeding postpartum is considered nifaas. Vaginal bleeding post abortion is also considered nifaas provided the diagnosis of a prior pregnancy was confirmed. In some cases of cesarian section in which the cervix was not opened, there is no vaginal bleeding and the mother can wash and pray immediately after birth. The majority of jurists consider 40 days and nights to be the maximum period of nifaas basing on a hadith narrated by Abudaud and Tirmidhi from Umm Salmah. Darqutni also reported from Umm Salmah that if the flow ceases before 40 days, she can wash, pray, and engage in coitus. Women in post-natal bleeding are excused from salat like those in menstruation. Post-natal mothers are excused from fasting but they have to make up later. The rules pertaining to menstruation apply to post-natal bleeding. Touching the Qur'an is forbidden. Sexual intercourse is forbidden during nifaas. Divorce of a woman in the post-partum period is prohibited

The Newborn

The books of sunnat have given reasons for the crying of the baby at birth. Every new born is touched by the shaitan, *mass al shaitan 'inda al wilaadat*. The fetus has the right to life and the right of inheritance. The infant has the right to a good name as well as general health care and nutrition. The mother has 3 basic rights: health care and nutrition; shelter; and payment for breast-feeding if divorced. The following are done for the newborn: adhan and iqamat at birth, naming, tasmiyat, by choice of a good name; circumcision, *khitaan*; shaving the hair, *halq al sha'r*; and *aqiiqah* by the 7th day. Two goats are slaughtered for a boy and 1 goat is slaughtered for a girl.

Breast-Feeding, *ridha'a*

Control Of Lactation

Onset, continuation, and end of lactation are under endocrine & neural control, neuro-humoral. Lactation can be affected by the psychological state of the mother. Drugs can also affect lactation either enhancing or suppressing.

Period Of Breast-Feeding

The Qur'an set the statutory period of breast-feeding as 2 full years, *muddat al ridha'a*. No maximum period was set. However maternal milk is not sufficient as a sole nutrient after 6 months and has to be supplemented. Artificial feeding is not a substitute for natural feeding because breast feeding involves emotional and psychological aspects in addition to providing food.

Payment For Breast Feeding

The father has to give financial compensation to a divorced wife who is breast-feeding his child. Any other woman can be paid to breast feed the baby.

Foster Breast Feeding

Breast-feeding is not merely nutrition. Unlike blood transfusion or organ donation, it involves a more intimate biological and psychological interaction between the infant and

the lactating woman. Breast-feeding of a child not issued from the mother automatically creates a legal relation that in the regard of the Law is no different from that of a son or a daughter. The relation encompasses the wet nurse, the children of the wet nurse, and the husband of the wet nurse. The conditions set by the Law for this relation to hold are: the wet nurse must be a female at least 9 years of age, the baby suckled must be less than 2 years old, suckling must be from the breast and not milk expressed in a container, and at least 5 separate breast feeding sessions must be held. The legal relationship thus established leads to marital restrictions between foster brothers and foster sisters. On the basis of necessity, dharurat, the Law permits collecting milk from several lactating mothers in a milk bank and using it to feed premature babies or those who have no natural mothers. This does not create legal relations based on *ridha'at* because the babies did not feed from the breast directly.

Activities During Breast Feeding

A nursing mother is allowed to combine 2 prayers. A nursing mother may not fast and make up later. Intercourse with suckling woman, *al ghayla*, is allowed. Work and maternity leave for lactating woman: New *ijtihad* is needed on the minimum period of maternal leave since the Qur'an sets a limit of 2 years.

Hygiene

Najasat And Fecal Hygiene

The following are *najasat*: human feces and urine, spilled blood, menstrual discharge, pus/discharge, vomitus, intoxicants, saliva of dogs and pigs, prostatic and urethral fluid, dead animals or those not slaughtered according to the Law, dead tissues or organs from living animals, milk and hair of inedible animals. The following are not *najasat*: saliva, nasal discharge, throat clearings, sweat, tears, fresh blood, fresh internal body fluids (cerebro-spinal, peritoneal, pericardial, pleural, and amniotic fluids), the normal vaginal discharge, male and female human sexual discharges, milk (human or edible animals). A human, dead or alive, believer or non-

believer, is not *najasad*. Excrement, *hadith* (feces, urine, and flatus) nullifies wudhu. Salat, sujuud, tawaaf, and carrying the mushaf are prohibitef without wudhu. A book whose material is more than 50% non-Qur'anic can be carried. Children can carry Qur'an without wudhu. Adults without wudhu can read Qur'an from memory. Deep sleep abrogates *wudu*. Excreta of animals are treated as human excreta. *Istinjah* is cleaning away excreta required for feces and urine but not flatus. When flatus is passed there is no cleaning but wudhu is repeated. A solid cleanser (paper or stone) is followed by water (the universal and best cleanser). The following are forbidden in the toilet: facing the *qibla*, facing *al quds*, conversation, giving or returning salaam, *dhikr al llaah*, use of golden or silver utensils, using containers of doubtful cleaniliness, carrying any object with Allah's name. The following are recommended: using the left hand, entering with the left foot, exiting with the right foot, exposing the minimum of nakedness, avoiding environmental contamination, brief toilet stay, a dua on entering, and tahmiid on exit. Hand washing is required after *istinjah* and before *wudu* and on waking up from sleep.

Urinary Hygiene

Urinary contamination of the body and clothes is a sin. Bladder emptying including urethral massage is required. Wudhu is followed immediately by salat in cases of urinary incontinence. Urination is forbidden on hard ground, in a vessel, in a bath, in a hole, in stagnant water, on any edible material, or facing Makka or *al Quds*. Urination is allowed standing or sitting down whichever causes least contamination. Urine of adults (male and female) is washed away. Floor contaminated by urine is washed with water. Water is splashed over urine of breast feeding boys. Urine of breastfeeding girls is washed with water.

Physiological Secretions

Wudhu and ghusl wash away skin secretions on the face, upper arm and hands, the feet, and the external meatus of the ear. Tears, morning eye discharges, nasal secretions, throat clearings, and saliva are not *najasad*. Upper GIT vomitus is not

najasad but lower GIT vomitus is *najasad*. Normal vaginal moisture, inter-menstrual vaginal discharges, and sexual discharge on a wet dream are not *najasad*. A woman with a chronic vaginal discharges or bleeding washes and pads the vagina, makes *wudhu*, and prays immediately because delay nullifies the *wudhu*. Menstrual blood is washed or scraped off the cloth which is then used for *salat*. Touching the penis or the perineal area of the self, of an adult, or a child, or of an animal nullifies *wudhu*. Semen, *mani*, is not *najasad*. Prostatic discharge, *madhi*, and urethral discharge, *wadi*, *najasad*. Blood of epistaxis and fresh blood are not *najasad*. Pleural, peritoneal, pericardial, and synovial fluids are not *najasad*. Saliva of a dog is *najasad* and has to be washed with water 7 times one of them with soil. Saliva of the cat and the camel saliva are not *najasad*. Saliva of domestic animals whose meat is *halal* is not *najasad*.

The Skin

Rubbing the hair with wet hands in *wudhu* removes air-borne pathogens and toxins. Hair can only be dyed with colors other than black. Shaving part of the head with no medical indication is *makruuh*. A woman cannot shave all her scalp hair without the husband's permission. The following are *sunnat*: trimming the moustache, growing the beard, cutting axillary and pubic hair, trimming finger and toe nails. *Wudhu* cleans parts of the body exposed to environmental pollution. Bathing the whole body is obligatory after *haidh*, *nifaas*, and coitus. It is obligatory before *hajj* and *umrah*. It is recommended on Fridays. A man can use henna if he does not resemble women. Tattooing is *haram*. Circumcision is *sunnat* for males and is recommended for females. Male circumcision is removal of the prepuce for hygienic purposes. Female circumcision is symbolic.

Patient Hygiene, *nadhafat al mariidh*

The following are not *najasad*: fresh blood inside the body, interstitial space fluids, effusions, and physiological secretions (esophageal, gastric, and naso-gastric). The fluids from an ileostomy are not *najasad* but those of a colostomy are *najasad*. A person with a discharging fistula makes *widhu* and prays.

Fistulas (vesico-vaginal, vesico-intestinal, urethro-vaginal, urethro-rectal, or urethro-cutaneous) may discharge stool or urine. Persons with discharging stomas and fistulas make wudhu and offer salat immediately.

Foods, at 'imat

Human Nutrients

The human needs food to survive and eating is waajib. The body needs about 50 different nutrients classified as carbohydrates, fats, proteins, minerals, vitamins, and water. Carbohydrates and fats provide energy. Proteins are needed to build and repair the body. Minerals play roles in metabolic processes. Vitamins are needed in very small quantities to help enzymatic function. Water is a major component of all tissues, it is a solvent that transports food and wastes in the body, it stabilizes temperature, and lubricates. Fiber is not a nutrient but helps in intestinal voiding.

Halal And Haram

The haram foods are specified. The rest are halaal. Haram foods can be eaten in situations of necessity, dharurat. Refusing to eat the halaal for no valid reason is bid'at. Halaal foods are all plants, all land animals not specifically forbidden, and products of halaal animals, and all All aquatic life except frogs and crocodiles. Haram foods are dead animals, animals not slaughtered according to the Law, animals that prey/hunt with fangs or talons, mules, donkeys, flowing blood, pork, and any food that is harmful to health as shown by customary experience or scientific investigation. Animals must be slaughtered by Muslim (man or woman) who is adult, sane, and mentions Allah's name when slaughtering. Meat slaughtered by people of the book is halaal. Meat is haraam if slaughtered by a murtadd or a kaafir even if they mention Allah's name. Any meat is treated as haram if the butcher is unknown. Meat sold in Muslim markets is considered halaal even if the butcher is unknown. Meat in the markets of mishrikiin is haraam unless the butcher is known. The best method of killing the animal is using a sharp knife that causes little pain to the animal when

done quickly. Use of gunshots and electric shocks are still controversial. Facing the qiblat during slaughtering is *mustahabb*; it is neither a *shart* or a *waajib*.

Etiquette Of Meals, *adab al ta'aam*

Believers eat only when they are hungry and do not eat their fill. Allah's name and a *dua* are mentioned at the start and hands should be washed. It is recommended to eat in a group. It is forbidden to eat at a table where alcohol is served. Eating is with the right hand even if the person is left-handed. Eating should be in haste with the objective of finishing and going on to do other things. The meal is not entertainment but is an act of *ibadat* to give the body energy. It is *sunnah* to eat from the top of the dish and eat only the food next to you. Eating while reclining or standing is prohibited. Eating hot food is forbidden. Food served should be finished. Certain foods like onions should not be eaten when planning to enter a mosque. It is forbidden to blow over food. Allah is praised at the end of the meal. A tooth-pick is used to remove impacted pieces of food. Hands are washed and the mouth is rinsed at the end of the meal. The host is praised and is thanked at the end of the meal.

Control Of Appetite

Satiety can be described in three states: the necessary, *dharurat*; the needed, *haajat*; and the excess, *fadh*l. *Dharurat* is the minimum nutritional intake necessary to maintain health in the best status. *Haajat* is intake that is more than *dharurat* but which prevents the feeling of hunger. *Fadh*l is the excess intake beyond the need. Obesity is a social and medical disease due to excess food intake. It interferes with physical acts of *ibadat* such as *saum*, *salat*, and *hajj*. Both obligatory and *nafileh* fasting help in controlling excess intake. Fasting is also training in appetite control during the ensuing non-fasting period.

Waste Of Food

Waste in eating and drinking is condemned. A Muslim should eat only what satisfies hunger and give the rest of the food to the needy. It is a waste to eat more than what you actually

need. Most of this just passes through the alimentary canal and is voided as waste. It is considered bad to eat whatever you desire without discrimination. Often people buy more food than they will cook and consume. Poor methods of food preparation result in food waste

Hunger

Voluntary hunger in Ramadhan gives the rich practical experience of hunger that makes them understand and appreciate the suffering of the poor. The Qur'an emphasized the virtues of giving food to the needy. Food security must be ensured for the individual, the family, and the whole world.

Drinks, *ashribat*

Sources And Types Of Drinks

The sources of water are rainwater, *mau al samaau*; water from oceans and seas, *maau al bahr*; and water from rivers, *maau al nahar*. The Qur'an described the following types of fresh water: *Mau ma'iin*, *Mau mahiin*, *mau 'adhb*, and *mau ghadq*. Water serves the purposes of quenching thirst, cooling the body, and cleaning. It is needed for metabolism. It also gives esthetic pleasure. Milk was mentioned in the Qur'an as a specific food for newborns and infants. The prophet recommended milk as the last drink on earth. Honey is a drink with nutritional and medicinal benefits.

Halaal And Haraam Drinks

The basis for halaal and haram drinks is the same as has been described for food. All drinks are permitted unless specifically prohibited. Drinks that contain sugar and could contain small amounts of alcohol due to fermentation are considered offensive. Also considered offensive are non-alcoholic drinks like tea or coffee that are addictive. *Khamr* is forbidden. Every intoxicant is *khmar*. *Khamr* is the key to sins. Many sins arise from taking *khmar*. Severe warning is given to those who call *khmar* another name to make it permitted. *Khamr* is not a medicine but a disease. Non-alcoholic drinks can be prohibited on the basis of harm-to good health.

Etiquette Of Drinking, *adab al sharab*

Drinking is encouraged especially in hot weather where there is high perspiration. Wastage is prohibited. It is recommended to praise Allah before the start of drinking milk. It is offensive to drink in one gulp. Drinking like a dog is prohibited. Drinking with the left hand is offensive. Drinking from gold or silver vessels is forbidden. Taking a breath during drinking is needed. Drinking while standing up was prohibited and was allowed in another instance. There is a special dua for drinking milk. A dua is recited at the end of drinking. The mouth is rinsed after drinking.

Hygienic Measures In Drinking

It is forbidden to breathe into the vessel. It is also prohibited to breathe or blow into the drink itself. Drinking from the mouth of the vessel is forbidden.

Rulings On Drinks

Ethanol is used as a solvent in medicinal preparation only in cases in necessity, dharuurat. Fermentation of sugar-containing drinks could produce small amounts of alcohol. Materials out of which alcohol is made should not be distributed. Community water supplies are a public property and care should be taken to make sure they do not get polluted. Addictive non-alcoholic drinks are forbidden.

Activity, *nasha'at*

Speaking

Human speech serves the purposes of communication, education, social interaction, and worship. It has a big impact. It should consist only of positive and good messages. A good word is charity. Obscene, bad, and immoral talk should be avoided. The older ones speak first. Speaking less is a sign of iman. Allah's name should be mentioned in conversation. Muslims are ordained to tell the truth. Telling a lie is a major sin. Exaggeration in conversation is a form of lying. Keeping silent to avoid self-incrimination is preferable to public declaration of sins. Open broadcasting of sins only serves to encourage others to commit the same sins. Secrets are a trust and should never be revealed in conversations. In some legal

situations like the marriage of a virgin, silence is construed to mean consent. Silence is forbidden if it leads to abandoning speech that is waajib or mustahabb. However silence is waajib if speech will be haraam pronouncements.

Walking

Bipedal walking enabled humans build a sophisticated civilization. Allah made the roads for human comfort and provided landmarks to show direction. It is not permitted to travel for visiting mashahid, qubuur, and any mosque apart from the 3 major ones. Tourism and walking must be purposive. Walking should be for worthy purposes like jihad, work, ibadat, seeking knowledge, physical exercise, and social interaction. The best manner is walking is taking quick and big steps. When walking or sitting by a public highway, the following rights of the road must be observed: lowering the gaze, avoiding causing any annoyance, and returning greetings. A dua is recited at the start of the journey. During the journey takbir is recited at high places or when ascending a hill. Tasbiih is recited in low places. A dua is recited at the end of the journey.

Sitting

A Muslim must be careful in choosing a sitting companion. A bad companion is a source of bad peer influence. Company of the righteous is recommended and that of transgressors is avoided. Sitting on graves is forbidden and visits to cemeteries should be brief. Sitting down serves the purposes of resting and relaxing muscles and the rest of the body. Sitting down is recommended in a calamity. Sitting is a form of ibadat. A believer remembers Allah sitting down. Sitting in the mosque waiting for salat has the reward of being in salat. Sitting in a study circle to study Qur'an and other religious sciences has been part of Muslim tradition for centuries. The study circles are usually held in the mosque. The prophet taught the etiquette of sitting in an assembly. Priority of sitting is given to the first-comer. A person cannot be forced to stand up and give his or her seat to a newcomer however is considered good manners and charity to do so. If a person goes out of the assembly for a short interval he has the right to reclaim his or her seat. There are special rights of sitting for the elderly, the learned, and the

handicapped. Children should sit behind the adults. Women have to sit separate from men and their manner of sitting should respect the shyness expected of a woman.

Standing

Standing is preparation for walking. Standing helps venous return due to the action of muscle pumping. The human upright posture is a bounty from Allah. Humans are able to maintain stationary equilibrium and dynamic equilibrium against forces of gravity and other forces like the wind or the push of other humans. Standing is involved in several acts of ibadat. Night prayer is called *qiyaam al llayl* because of the prolonged standing involved. Humans stand in remembrance of Allah. There is standing in the 5 obligatory prayers. During hajj there is standing at Arafat, *wuquuf Arafat*, and at Muzdalifat. Care must be taken to make sure that prolonged standing in salat does not cause postural hypotension due to venous pooling of blood in the lower extremity. A Muslim can stand up to show respect to another person. The respect to humans in extended even to the funeral bier. It is recommended to stand up when a funeral procession passes by.

Sleep And Rest

Sleep In The Qur'an And Sunnat

Sleep is a sign of Allah and is a period of rest. It is a form of relative physical inactivity and inattentiveness to the environment that are not compatible with divine attributes. Allah who has to look after the whole universe and its contents does not fall asleep. The Qur'an and sunnat described sleep as a type of death. Some who go into sleep may never wake up again. The Prophet taught special supplications, *dua*, on falling asleep and on waking up in view of sleep being a major transitional event. Sleep involves a temporary suspension of full sensory perception and interaction with the environment. A sleeping person is not legally accountable for the period during sleep. In the same way deep sleep abrogates *wudhu* because there is no way of telling what actions the sleeping person could have undertaken during sleep resulting in abrogation of *wudhu*. Sleep may prevent a person from performing *salat* at

the right time. *Shaitan* tries his best to prevent a sleeping person from waking up at the time of *salat*.

Purposes And Physiology Of Sleep

The day is light and was made for humans to seek sustenance. The night is a period Allah set aside for rest, sleeping, and ibadat. The change or alternation of day and night is among the signs of Allah. The following biological phenomena are affected by the diurnal variation or biorythm: sleep, cortisol excretion, and melatonin excretion. Sleep is a biological imperative. An adult needs 8-9 hours of sleep in a 24-hour cycle. The period of sleep is psychological rest (decreased anxiety and sensory stimulation) and biological rest (lower respiration and circulation). Sleep is an act of ibadat that is opened and is closed by special supplications, *dua*. Reorganization of brain architecture occurs during sleep. Homeostatic adjustments are easier to carry out during sleep because there are no concurrent new changes. Sleep is a recurrent reversible phenomenon. Some bodily functions are diminished during sleep (muscle inertia, basal metabolic rate, and sensory reactivity to the environment) whereas others are increased (hand mitosis and electrical activity in the brain). No functions ever stop completely. Sleep and wakefulness are a balance between the activation of the sleep system and the wake system. We know from studies of physiology and the evidence from the sunnat that sleep is not a passive activity. The Prophet was described as sleeping with the eyes but not with the heart. Thinking and memory take place during sleep. Mitotic activity is highest during sleep. Metabolism continues during sleep but at a lower rate.

Etiquette Of Sleeping, *adab al nawm*

Wudhu is made before sleep. Sleeping is on the right facing the *qibla*. Sleeping on the face is prohibited. Dua is made on sleeping, on being alarmed in sleep, and on waking up. Yawning and sneezing may occur during sleep or on waking up from sleep. Hands are washed on waking up. The face should also be washed to take away ocular, nasal, and oral secretions. Sleeping naked is forbidden. A human should take the adequate amount of sleep appropriate to the age and physiological condition. More sleep than this is offensive.

Waking up for ibadat at night has special merit. Most sleep should be at night. The prophet recommended siesta, *qailuulat*, a period of sleep and rest in mid-day. Sleeping on the side nullifies wudhu. Sleeping before salat nullifies wudhu. Sleeping in salat is from shaitan. Night prayer should be abandoned if sleep is overwhelming.

Dreams

All people dream in both REM and non-REM sleep but dreams during REM are forgotten. Remembering of dreams is not perfect. Dreams may be review of actual daytime activities with considerable distortion of the reality. Good dreams are from Allah and should be told. It is an offense to lie when reporting a dream. Bad frightening dreams are from shaitan and should not be reported. Dreams of prophets are always true and are part of revelation, *wahy*. Dreams of righteous people are a type of prophethood. We however can never tell for certain who is a righteous person in contemporary times because as humans we judge from outside appearances and only Allah knows what is inside humans. Only dreams of prophets can be interpreted correctly. Only prophets can interpret people's dreams correctly. Interpretation of dreams of ordinary humans who are not prophets by non-prophets should be discouraged.

Disorders Of Sleep

Insomnia is a symptom for other illnesses. It is due to to activation of the reticular system by pain or emotional factors that causes activation of the limbic system. Somnambulism (sleep-walking) is dangerous because a person can harm himself and others. Bed-wetting (nocturnal enuresis) is normal in children. It stops with age as neurological and bladder functions mature. It may have a genetic basis. Narcolepsy is an irresistible urge to sleep. It may be part of certain disease syndromes. It could interfere with performance of salat. Shaitan can tie knots on the head of a person to make it difficult to wake up. It can also urinate in the ears to prevent waking up. This is part of shaitan's strategy to prevent humans from remembering Allah.

Disease Conditions

Fiqh al Amraadh

Conditions Of Organ Systems

- Urogenital System
- Cardiorespiratory System
- Connective Tissue System
- Alimentary System
- Sensory Systems

Other Disease Conditions

- Pathophysiological Disorders
- General Systemic Conditions
- Psychiatric Conditions
- Neurological Conditions
- Age Related Conditions

Urogenital System

Disorders Of The Urinary Tract

In urinary incontinence or hematuria, *wudhu* is followed immediately by *salat* with no delay. Suitable urinary bags should be worn to prevent soiling clothes and the place of prayer. Hematuria causing anemia exempts from *saum*. Patients with renal failure not in coma pray as much as they can but are exempt from *saum* in order to control fluids and electrolytes. In urolithiasis, movements are restricted if they trigger pain and *salat* is delayed while patients are under sedation to control pain. Stress of hajj movements and change in meals in a hot and dry climate may trigger pain. Patients prone to stone formation have to be careful while fasting to make sure they take plenty of fluid and avoid hot environments that lead to excessive fluid loss.

Disorders Of The Male Genital Tract

It is offensive for a male but not a female with no libido to marry. Lack of libido is grounds for divorce or *khulu'u*. In cases of impotence marriage is nullified after a grace period of

1 year. Pre-mature, delayed, or no ejaculations are not sufficient grounds for divorce. Priapism causing physical harm to the wife and should be treated before coitus. Polygyny is recommended for a male with excessive unsatisfied sexual desire. Circumcision, partial or complete excision of the prepuce, is a hygienic measure highly recommended but those who cannot be circumcised should be careful to clean properly under the prepuce during *istinjah*. Cases of cryptorchidism should seek counseling about fertility before marriage.

Disorders Of The Female Genital Tract

Kindness is required for wives when they experience loss of libido, lack of sexual enjoyment, dyspareunia, and vaginismus. Lack of libido and sexual interest in a woman is not considered a barrier to marriage. In cases of prolonged menstruation or dysfunctional uterine bleeding, it suffices to pad the perineum, make *wudhu*, and pray immediately without waiting. Menstruation exempts from fasting and not DUB. Hormonal regulation is menstruation is allowed for hajj but not fasting of Ramadhan. Sexual relation can be undertaken in prolonged DUB if care is taken to prevent ascending infection. DUB is ignored in computation of *'iddat* in both pre-menopausal and post-menopausal women. Surgical treatment of septate or imperforate vagina should be attempted before marriage dissolution due to non-consummation. The Law treats infertility as a disease for which surgical and medical treatment must be sought. A spouse is legally liable for transmitting infection to the partner. A proper balancing of harm, *dharar*, and benefit, *maslahat*, must be considered in treating benign malignancies because of destruction of the reproductive function. Hysterectomy for uterine fibroids destroys the reproductive function and leads to psychological problems in a woman who then can no longer menstruate. The period of post-abortion bleeding is recognized as *nifaas*. In cases of hemostatic disorders and eclampsia termination of the pregnancy may be the best way to save the mother's life but it will adversely affect the fetus who may not yet be viable extra-uterine. Delivery complication may lead to difficult choices

between saving one of the lives: mother or infant. The Law gives precedence to the mother.

Gender Differentiation And Gender Identity

The disorders are anatomical and physiological with serious behavioral and legal implications affecting marriage, procreation, and inheritance

Obstetric And Gynecological Diseases

Radical mastectomy for breast cancer has cosmetic implications that can affect marital relation through psychological effects. Ovum donation or in vitro fertilization are prohibited for anovulatory infertility.

Cardiorespiratory System

Upper Respiratory Disorders

A person with URTI can be excused from leading *salat* because of difficulty in recitation of the Qur'an. Infectious patients should not pray in the mosque and should restrict their social interactions.

Lower Respiratory Disorders

Dypnoeic patients should limit their physical movements in *salat* and *hajj*. Repetitive cough may make recitation in *salat* difficult. Hemoptysis does not void *wudhu* and fasting. Patients with pneumonia or pneumonitis will experience pain on recitation and prostration. Patients on respiratory support cannot recite Qur'an during *salat*.

Vascular Disorders

Orthostatic hypotension is avoided by shortening the recitation to avoid standing for a long time, prolonged sitting between prostrations, frequent periods of rest and sitting down during rites of hajj like *tawaaf*. Syncope necessitates delay of *salat*, hajj rites, and judicial proceedings. Caution must be taken because physical exertion in *salat*, hajj and coitus may trigger a coronary attack or rupture of an aneurysm. Patients with intermittent claudification, varicose veins, phlebitis, and thrombophlebitis should make *tayammum* and avoid very water

for *wudhu* and must be cautious in *salat* movements or sitting down for *tashahhud*. In DVT, movements of the lower limb in *salat* and hajj are limited for fear of dislodging an embolus. Prior prolonged sitting predisposes to embolus formation.

Diseases Of The Heart

Benefits of surgical correction of congenital heart disease are weighed against the risk of surgery in small children. In cases of mitral stenosis, mitral incompetence, and restrictive pericarditis, physical exertion in *salat* and hajj can lead to more severe decompensation.

Circulatory Disorders

Patients in CCF may be too weak to pray. Standing up for prolonged periods in *salat* may worsen the lower leg edema and compromise venous return even further. The muscle movements of *salat* may however have a beneficial effect in venous return. Fasting in CCF is not recommended. Hajj is better postponed in CCF because the patient may not be able to withstand the extra physical exertion involved. In states of shock the physical movements of *salat* and *hajj* are not possible and Fasting is not allowed because of the need to replace body fluids.

Connective Tissue System

Disorders Of The Hematopoietic System (Dam)

It is obligatory for the mother to take hematinics as directed in the interests of the fetus. It is obligatory on parents to provide sufficient nutrition to the infant to prevent anemia. Although breast-feeding is recommended for 2 years, it is not sufficient by itself after the 6th month. The father is obliged by Law to provide sufficient nutrition to the nursing mother and the infant to prevent anemia.

Disorders Of The Bony Skeleton

Congenital and acquired disorders of the bony skeleton may limit the range of movements in *salat*: sideways movement of the neck in *tasliim*, prostration on the floor, raising the hands in

takbir, and pointing with the finger in *tashahhud*, and bowing. *Tawaaf* in *hajj* may be difficult with lower limb pathology. Use of an artificial limb is no bar to *hajj* and *tawaaf*. Patients can support themselves on a stick or a pillar during *salat*. Pain and restricted movements of the vertebral column make bowing more difficult. Standing for prolonged periods may also be difficult. Prostration may be completely impossible. The requirement to straighten the back after bowing may be relaxed. Back pain may also interfere with sexual function. Restricted bending of the knees interferes with sitting properly. Knee problems may make *tawaaf* and *sa'ay* in *hajj* difficult. In case of foot problems, a pilgrim may wear sandals if he has disease that makes it impossible to walk barefoot around the *ka'aba*. If shoes are needed for orthopedic conditions they can be worn in *hajj* and *salat*.

Wudhu may not be possible with open wounds and compound fractures and resort is made to *tayammum*. Pain due to sprains and fractures may limit movements in *salat*. Movements will not be possible at all when the limbs are immobilized. When a pilgrim has a fracture or becomes lame for any other reason, he is discharged from the rites of *hajj* and has to repeat the *hajj* later. Orthopedic fixation of some joints like the hip or knee joints may limit the range of movements possible in *salat*. In *hajj tawaaf* may have to be done in a wheelchair. *Wudhu* can be made on a limb stump preferably washing. If washing is difficult the stump can be wiped with a wet hand. If a leg is in a cast, the rest of the organs are washed with water and *tayammum* is carried out for the limb in a cast

In osteomyelitis, pain may limit movements in *salat*. If there is a discharging wound, *tayammum* will be needed instead of *wudhu*. Care is exercised in *salat* and *hajj* to avoid pathological fractures that are common in bones with neoplastic disease. In osteoporosis care has to be taken in movements in *salat* and *hajj* to avoid fractures. Treatment of osteoporosis with

hormone and mineral replacement is obligatory for postmenopausal women so that they can lead a normal life.

Cartilage And Ligament Disorders

Laryngeal, pharyngeal, or other oral diseases may impair the ability to recite the Qur'an. Patients with such conditions cannot be prayer leaders, *imaam al salat*. Public duties like leadership that require communication may be impaired. Pleas and evidence in court may also be affected. *Salat* is intimately related to joints because of the physical movements involved. Osteoarthritis and rheumatoid arthritis cause pain and limitation of movement. These limit the physical actions needed for *salat* and *hajj*. Degenerative disorders of the vertebral column such as spondylosis (arthritis of the spine), intervertebral disc disease (herniation), spondylolisthesis (anterior displacement) impair ability to stand for long periods in *salat* as well as *tawaaf* and *sa'ay*. *Tayammum* is carried out in cases in which either hot or cold water worsen the pain of rheumatism.

Muscular Disorders

Injury to muscles will necessitate limitation of movements in *salat* while they heal. Some diseases of muscle weakness like myasthenia make it impossible to make the full range of movements required in *salat*.

Other Connective Tissues

Skin lesions such as eczema, dermatitis, itch, discharges, rashes, and chronic ulcer are a reason for *tayammum*. If the skin is bandaged, the bandage is wiped with the wet hand. Shaving or cutting hair is forbidden in *hajj*. An exemption is made for those with lice in their hair but a *fidyat* has to be paid. Injury to ligaments may limit movements in *salat*.

Alimentary System

GIT Diseases

Patients with an acute abdomen are immediately excused from the obligation of *saum* until full recovery. *Salat* can be performed as much as their physical condition allows. *Saum*

may not be possible in advanced stages of peptic ulcer disease. The impact of GIT neoplasms on *saum* and *salat* is variable depending on the complications. Conditions of the oropharynx interfere with eating and drinking as well as recitation of the Qur'an in *salat*. Esophageal disorders may have implications for fasting patients. Esophageal varices may lead to hematemesis that voids fasting. Patients with malabsorption may be exempted from fasting while they are on treatment with special diets that have to be taken during the day or if their nutritional status requires regular food intake. Use of a hernia belt is allowed in *hajj* for those whose small intestine herniates.

Diseases of the large intestine interfere directly with fasting if they are associated with vomiting which voids fasting. Continuous diarrhoea may make the maintenance of *wudhu* difficult. Stoma created after operation for cancer of the colon do not normally interfere with *saum*, *salat*, or *hajj*. Constant flatulence may make maintenance of *wudhu* difficult. It is recommended that *salat* is performed immediately after *wudhu*. If flatulence is continuous it can be ignored but efforts at finding a treatment should be continued. In cases of bleeding due to hemorrhoids and anal fissures, *wudhu* will have to be made immediately before the *salat* and for that *salat* only. It has to be repeated for every *salat*. Care must be taken during *istinjah* not to cause undue pain in case of anal fissures. Extreme obesity makes *salat* difficult because of body weight, physical weakness, and restricted movements. *Saum* is good for the obese.

Impact Of GIT Symptoms And Signs On Ibadat

Salat is delayed while anticipating vomiting because vomiting is *najasat* and will nullify the *salat* anyway. Vomiting nullifies fasting; it is recommended to continue fasting even after an episode of vomiting but make up the day after. Hiccup in *salat* may make recitation of the Qur'an impossible. If the hiccup persists it is preferable to terminate the *salat* and wait until it subsides. In extreme cases of peptic ulcer disease the patient is exempted from fasting. Any incidence of audible smelt flatus nullifies *wudhu*. A general feeling of flatulence does not nullify *wudhu*. *Salat* should not be terminated on mere suspicion of

passing flatus. A situation of continuous diarrhoea makes it difficult to maintain a state of *wudhu* or to pray in congregation. When an episode of diarrhoea is impending, *salat* is terminated by *tasliim* at any stage and is resumed after defecation and a new *wudhu*. In cases of anal incontinence, *wudhu* is made immediately before each prayer. Upper GIT bleeding that does not cause visible blood at the anal opening does not nullify *wudhu*. If it leads to hematemesis, *saum* is void and has to be made up later. Fresh bleeding from hemorrhoids and anal lesions does not nullify *wudhu* but must be washed away immediately and before *salat* commences. Any cause of abdominal discomfort such as pain, cramps, spasms, and digestive disorders make it difficult to concentrate in *salat*. It is recommended to delay *salat* until the discomfort is treated. Pain of gallstones in an acute attack makes concentration in *salat* difficult. Associated vomiting may void *saum*. The colostomy site is kept as clean as possible all the time. *Wudhu* is made before each *salat*. Normally there is no interference with *saum*. Halitosis, bad oral smell due to caries, gingivitis, and oral ulcer; is a reason for keeping away from public assemblies until the condition is cured. Disease transmission by feco-oral route requires special measures to protect public health in the food service industry. Islamic teachings about personal hygiene play a role in preventing the spread of infection.

Sensory Systems

The Vision System

A blind person is not obliged to attend *salat al jama'at*, *salat al jumu'at*, and hajj if he no guide. He can be a *muaddhin* only if someone to tell him the correct time. He can also be *inaam*. He can be a political leader if the visual impairment does not impair performance of leadership functions. He cannot be a judge because of inability to see witnesses and assess their demeanor. He can be a scholar or a mufti. He can testify if the evidence does not involve sight. He can marry if measures are taken ensure enough mutual knowledge of the future spouses based on other senses information from third parties. He can be *wali* in marriage if he knew the spouses before getting blind

and can recognize both using other senses. Selling and buying by a blind person can take place in transactions where fraud is unlikely. Blind persons can offer professional services if there is no possibility of harm due to their lack of sight.

The Auditory System

A deaf person is obliged to attend *salat al jumu'* at if others hear *adhan* and inform him. He can be *muaddhin* if others tell him the correct time. He can be *imaam*. He can follow by *imaam* by watching what the *imaam*. He can teach Qur'an but it is preferred he does not do so because he cannot hear and correct mispronunciations. He is not obliged to return greetings because he cannot hear but is obliged to respond to sign language of greeting if he is sighted. Deafness reduces competence as a leader but is not an absolute contra-indication. A deaf judge will not be able to discharge duties fully. A deaf person can be a scholar and can give religious rulings if he can read the questions and answer by writing or by sign language. He cannot be a witness over matters that required perfect hearing. He can contract a marriage by use of reading or sign language. He can declare divorce but. He can buy and sell as long as he understands the transaction and can communicate in writing or by sign language. It is forbidden for a deaf person to engage in any professional work for which hearing is necessary. In vestibular disturbances standing up in *salat* or *tawaaf* may require support.

The Olfactory System (Shamm)

In hyposmia the victim may not be able to smell flatus and thus may continue praying with an invalid *wudhu*. Hyperosmia and parosmia may results in unnecessary concern about presence of *najasat* where it is insignificant. The halitosis associated with fasting is due to reduced oral cleansing action of saliva. It can be reduced by increased oral hygiene. Impairment of the taste sensation may reduce enjoyment of food. It may also impair ability to discriminate dangerous things and avoiding swallowing them. Halitosis due to disease or poor oral hygiene may make social intercourse difficult. It is especially offensive in the mosque. Use of perfume to control body odor in public

places like the mosque is mandatory to avoid annoying others. Body or oral odor may cause so much distress in a marriage that it may lead to divorce. Impaired smell may make transactions involving perfumes invalid because the buyer cannot identify what is being bought. Similarly impaired smell may lead to buying of rotten products without knowing their true state. Court evidence based on smell may not acceptable in situations of olfactory disorders.

The Taste System, *dhawq*

If taste is defective, it will not be possible to tell that water is polluted and is not suitable for *wudhu*. Enjoyment of food decreases when the sense of smell is defective. Dangerous food may also be consumed if it cannot be tasted. In selling food and drinks, the buyer may use taste to make sure the product is wholesome. This is not possible when the sense of taste is defective. Evidence in court based on taste of products may not be accepted in cases of a defective taste sense.

Other Sensations

Loss of tactile sensation does not affect *wudhu* and *salat*. It can lead to ingesting rough and dangerous materials. It impairs sexual sensation may lead to stresses in marital life. Loss of tactile sensation may be a cause of accidents at work. The integrity of the tactile sensation is considered when assessing certain types of court evidence. An impaired sensation of temperature may result in unnecessary exposure and heat stroke during hajj. Hot and therefore harmful food may be eaten when temperature sensation is impaired. Inability to adjust to extreme climatic conditions may be grounds for divorce if a promise was made in the marriage contract that the spouse will not be taken to another country. Workers must not be exposed to extremes of temperature. Extreme pain may prevent concentration in *salat*. Pain may cause insomnia. Chronic pain due to PID and other causes of dyspareunia may create marital stress. Chronic pain may lead to psychological stress. Severe pain may lead to criminal behavior. *Salat* is delayed in cases of extreme hunger sensation. Loss of the hunger sensation is dangerous to life. Inability to extinguish the

feeling of hunger with food intake may lead to loss of appetite control. Children may be severely undernourished when they do not feel hungry and refuse to eat food. Extremes of pain may lead to crime. Concentration in *salat* is impaired in extreme thirst.

Pathophysiological Disorders

General Ill Feeling And General Weakness

Non-obligatory duties are delayed but obligatory acts like *salat*, *saum*, and *hajj* are delayed only for physical inability to perform. The physically disabled is allowed to pray sitting or lying down. Exemption from *saum* is only for potential physiological harm. The weak can leave Muzdalifah earlier. Travelers may shorten and/or combine *salat* or break the fast and make up later. *Salat*, *saum*, and *hajj* rites are delayed for high fever. Non-obligatory fasting is recommended for the obese but is discouraged for the under-weight and the pregnant. Obligatory fasting and jihad are delayed in cases of extreme malnutrition and cachexia. The obese are obliged to reduce weight especially if they have impairments in *salat*, sexual function, and jihad. The underweight are obliged to seek nutritional treatment. Extreme fatigue necessitates delay of *salat* for lack of concentration, delay of *saum*, delay of *hajj* rites except standing at Arafat. Acts of '*ibadat* cannot be delayed in the chronic fatigue syndrome. The victim of this condition should try to perform as many acts as are possible and in the meanwhile try to seek treatment. Supplications, *dua*, and recitation of the Qur'an are highly recommended because diseases of the heart may be an underlying cause of the chronic fatigue syndrome.

Fever

High fever may be reason for delaying *salat* because of generalized weakness and discomfort. *Saum* with high fever aggravates dehydration and may have to be delayed. In cases of high fever, *hajj* may be difficult due to general weakness and lack of physical energy to complete the rites of pilgrimage. Fever aggravates dehydration in the dry climate of Hejaz. Care

must be taken to prevent spread of contagious diseases because most cases of fever are due to infection.

Pain

Salat is delayed for severe acute headache, acute backache, and skin itch until the patient is able to concentrate. *Salat* is not delayed for chronic backache or skin itch but should be made as short as possible. *Salat* is interrupted for an anginal attack to rest and use medication and is continued after that with *sujuud al sahaw* at the end. Use of sub-lingual medication does not nullify the *salat* of a patient with chronic angina. Arthritic joint pain necessitates restricting movements during *salat*. If the pain is severe, the guidelines for the *salat* of the sick are followed. Patients with chronic pain on regular twice or thrice daily medication are exempted from fasting. Joint or back pain in hajj is an exemption to allow the pilgrim to be carried or to be put on wheeled transport during *tawaaf* and *sa ay*.

Altitude And Space

Concentration is *salat* at high altitude is impaired of low oxygen concentration. *Salat* in weightless space is feasible but the physical movements may be restricted and the guidelines of the *salat* of the sick may have to be employed. *Saum* at high altitudes is a challenge because of the cold that requires high and regular food intake to generate enough metabolic heat to keep the body warm in the cold atmosphere. The impact of weightless ness in space on *saum* has not yet been studied.

Adverse Environment

Salat is delayed on a hot day until the temperature cools down to what is reasonable. *Tayammum* is carried out on cold days even if water is available. Cooling the body is permitted in *saum*. *Saum* can be broken on very hot days for fear of severe dehydration. Special protection is needed against heat stroke and dehydration during hajj. *Tayammum* is prescribed if the extreme cold may aggravate peripheral vascular disease. If the floor is too cold to stand during prayer, wearing of sandals or *khuff* is allowed. If frostbite or hypothermia occurs as a result of cold exposure, fasting is broken to eat food to generate enough metabolic heat to raise body temperature. *Saum* may be

broken on cold days for fear of severe dehydration and due to increased calorie requirements to maintain body temperature. *Salat* on a cold day is preferably offered in the home to avoid cold exposure in the atmosphere. In case of fear of light injury it is recommended to pray inside a house, use a shelter, or wear special headgear and eye wear to avoid cosmic radiation. Photo dermatitis in hajj is avoided by avoiding going out during the middle of the day.

General Systemic Conditions

Endocrine Disorders

In diabetes mellitus, blindness exempts from *salat al jama'at*. Diabetics with leg ulcers make *yatammum* instead of *wudhu* and adopt the most comfortable *salat* position. Insulin-dependent diabetics and pregnant diabetics are exempted from saum. Diabetics controlled on oral medication and diet can fast under physician supervision. Patients anterior hypoparathyroidism and hypothyroidism offer *salat* and saum depending on clinical severity. They are treated sexual failure before marital dissolution is considered. They perform *tayammum* instead of *wudhu* for cold intolerance. The default age of 15 is used to define adulthood if puberty is delayed. They can use growth hormones can be used for growth retardation. Wet nurses, milk banks, or artificial formula are used for lactation failure. In cases of amenorrhoea, the presumptive period of 4 months + 10 days is used as the '*iddat*'. Patients with diabetes insipidus are exempted from saum until electrolyte and fluid imbalances are corrected. Patients with hyperthyroidism with restlessness preventing concentration offer brief *salat* with short recitation. Patients with Addison's disease offer *salat* sitting down to avoid postural hypotension and delay saum and hajj until correction of fluid and electrolyte imbalances. Patients with primary hyperaldosteronism exempted from saum until correction of electrolyte imbalances. In adreno-cortical excess standing and posture of *salat* are altered (because of myopathy and possibility of fractures due to osteoporosis), saum is delayed during the treatment, hajj is delayed, and legal

competence in impaired if psychotic symptoms are severe. Hormonal treatment of testicular and ovarian disorders, pseudohermaphroditism, gynecomastia, and hirsutism is allowed if benefits outweigh risks. Legal liability is decreased if criminal behavior is due to hormonal status.

Infection

Infectious persons may be excluded from hajj and congregational *salat*. Under the principle of public interest superseding private interest, the following are allowed in an epidemic: restriction of movement, quarantines, involuntary measures (mass immunization, treatment, and prophylaxis), destruction of property (eg infected animals). Premarital screening is obligatory in places with endemic infectious diseases. Conjugal sexual rights can be denied for fear of infection. Conviction for *zina* cannot be based on incidental finding of STD in an unmarried person. Seeking divorce or *khulu'u* can be based on discovery of STD in a spouse. A spouse is legally liable for transmitting STD. Islam gave detailed teachings on personal hygiene, food hygiene, excreta disposal, and waste disposal in order to keep the environment clean and healthy.

Neoplasia

Intervention against cancer risk factors is based on the principle that harm should be relieved, *al dharar yuzaal*. Laws on sexual, body, and environmental hygiene decrease risk exposure. The tobacco-cancer link is considered *yaqeen* by physicians making tobacco haram. It is considered *ghalabat al dhann* by jurists making tobacco *makruuh*. The diet-cancer link does not reach the level of *yaqeen* or *ghalabat al dhann*. The Law can regulate institutional but not home diets. Parents are liable for child malnutrition due to negligence. Early disease screening is obligatory if scientific evidence shows benefit. Treatment of advanced disease is based on the balance of harm and benefit, both immediate and long term.

Genetic Conditions

Jurists are not unanimous on the obligation of pre-nuptial genetic testing and advice. Results of genetic testing could be used as a basis for refusing marriage or refusing to get pregnant. Pre-natal genetic screening in the form of amniocentesis for sex selection may encourage illegal abortion. Amniocentesis for disease detection may be of benefit to the parents to make preparations to take care of sick newborns. Marriage of close relatives has to be considered in the light of the balance of disease risk due to consanguinity and social advantages of marrying within the family. Treatment by genetic engineering is allowed under the rubric of permissibility of change of *fitra* as long as it is not done with the purpose of defying Allah's creation. Widespread genetic testing may introduce systematic social discrimination based on gene profile for diseases and provide a false scientific basis for racial discrimination

Traumatic Injury

It is allowed to wash a patient in ablution. *Tayammum* is preferred for cases of profuse or active bleeding at sites of *wudhu*. In cases of wounds, a wet hand is rubbed on the bandage. *Tayammum* is carried out instead of *ghusl* in cases of burns or other conditions preventing use of water. Patients with physical disabilities pray in the most comfortable position. The disabled are exempted from physical participation in jihad; they can however make monetary and other contributions. Impotence in paraplegia and physical disability preventing working to support the family are grounds for marriage nullification if the wife requests. The Law provides for financial compensation in cases of accidental injuries.

Psychiatric Conditions

Disturbance Of Consciousness

Forgetfulness in *salat* is remedied by the prostration of forgetting. A forgotten *salat* is offered when remembered. In complete loss of consciousness, there is no obligation to pray.

In semi-coma, syncope, or stroke the patient tries to pray as much as they can. Stroke patients must be careful not to fall down during *salat* due to the limb paralysis or paresis. A dozing person stops *salat*, sleeps, and resumes when conscious of what he is reading. In fright or inability to concentrate, *salat* is shortened. A person who forgets and eats in Ramadhan just resumes fasting and completes the day. The obligation of fasting is dropped if the patient is in coma or is fully unconscious. Hajj is delayed if consciousness is impaired. Hajj rites are delayed in case of syncope following postural hypotension. Semi-conscious patients or those in coma are fed without their consent under the purpose of preserving life. Pronouncements of divorce or *khulu'u*, marriage, or contracts under psychosocial stress or impaired consciousness have no legal effect because of legal incompetence. However a guardian, *wali*, on behalf of the unconscious, can conclude valid contracts. Court testimony by a semi-conscious person is not allowed. There is reduced legal or civil liability for crimes and contracts under the influence of ordinary psychiatric medication. Liability is not reduced for crimes and contracts committed under the influence of alcohol or illegal drugs.

Personality Disorders

Personality disorders not accompanied by cognitive effects have no impact on *'ibadat*. Severe personality disorders exempt from hajj for fear of crises. Preventive measures are needed to protect the public from psychopaths. Severe personality disorders are a contra indication for marriage. Personality disorder may be considered as legal incompetence in contracts and criminal prosecution.

Neurotic And Psychotic Disorders

Neurotic and psychotic disorders: Obligatory *salat* is anxiety due to inability to concentrate. Compulsive-obsession about passing flatus in *salat* should be ignored. It may also cause forgetfulness in *salat*. Psychiatric disease does not affect the obligation of paying *zakat* because *zakat* is related to the wealth and the not the individual. Psychiatric illness that affects legal competence exempts from *salat* and *hajj*.

Attempts are made to treat psychiatric illness before resort to divorce. A marriage contract is deemed void or irregular because of mental incompetence. Divorce pronouncements by an insane person have no immediate legal effect unless confirmed by a competent court. Contracts by a schizophrenic or a patient with mood disorders clouding clear thinking are void. Evidence by a psychiatric patient is evaluated in view of the type of cognitive or personality defects because some may be acceptable. The evidence of patients with mood disorders must be considered in the light of their clinical conditions.

Sexual Disorders

Sexual disorders: Sexual disorders usually have no direct impact in *'ibadat*, *aadaat*, or *mu'amalaat*; they however are intimately related with marriage and divorce. Divorce or *khuluu* can be considered for lack of libido, sexual deviation (e.g. sadism or masochism), transsexual behavior, male impotence, and female vaginismus/frigidity. Fasting may help control sexual desire.

Stress Disorders

Stress can be controlled internally *salat*, *dhikr*, and *i'tikaf*. It may lead to wrong unintended decisions in transactions, produce adverse effects on marriage leading to divorce, affect appetite, and impair concentration in *salat*. Hajj and *saum* may increase the stress level. *Salat* generally decreases stress levels.

Neurological Conditions

Epilepsy

Epileptics under control can pray, fast, and undertake hajj but have to take medication and avoid triggers of attacks.

Degenerative Conditions

Salat and *hajj* may be difficult in advanced Parkinson's disease. Demented patients cannot be leaders in *salat* because

of confabulation. Dementia that does not impair cognition does not exempt from *salat*, *saum* or *hajj*. Court testimony of elderly demented patients is evaluated in light memory and cognition. Since dementia is incipient, special tests of competence are needed before court testimony. Dementia is a reason for exclusion from leadership.

Central Neurological Conditions

Head injury may be associated with paralysis, impaired consciousness, or loss of sensation affecting *salat* and *hajj* obligations. Brain tumors affect *salat*, *hajj*, marriage contracts, and judicial proceedings depending on the severity. Mental clouding from brain infection affects *salat*, *saum*, *hajj*, and witnessing in court. Spinal cord injuries may lead to quadriplegia and paraplegia that limit movements in *salat*. *Tawaaf* is undertaken on a vehicle.

Peripheral Neurological Conditions

Disease such as myasthenia gravis limits *salat* movements and may make *hajj* difficult. Pain from neuropathies may be increased during *salat* movements.

Others

Aphasia and dysphasia affect conclusion of marriage contracts, witnessing in courts of law, and public leadership duties. Vestibular disturbances necessitate support to stand in *salat* and *tawaaf*.

Age-Related Conditions

Pregnancy & And Delivery

Pre-natal diagnosis could be prohibited under the principle of closing the door to evil if it leads to abortion. Amniocentesis to determine life and gender at time of father's death determines fetal inheritance rights. Consideration of maternal interest has priority over consideration of fetal interests in medical and surgical interventions in pregnancy and delivery. *Adhan* and *iqamat* are required for the newborn. The '*aqiiqah* ceremony

for the newborn is a social occasion for introducing the baby as a new member of the community. Circumcision can be delayed for fear of neonatal bleeding. Neonatal disease screening and immunization are encouraged by the Law. Breast-feeding is mandatory for 2 years according to Qur'anic injunction. Foster breast-feeding is allowed but it creates relations like those of a biological mother that restrict marriage. Use of artificial formulas is allowed but milk banks are discouraged. Payments are made to a divorced mother for breast-feeding their babies. Post-partum hemorrhage has the same legal rulings as menstruation. Post-natal depression may constitute deficient legal competence for making treatment decisions for the mother and baby.

Infancy

Nafaqat includes all material sustenance needed for the infant such as food, clothing, and medical care. The father is responsible for *nafaqat* during marriage and also after divorce. The extended family and the state are responsible for financial maintenance of single poor mothers. Child abuse and neglect can be physical, sexual, or psychological. Vaccination of infants is obligatory.

Childhood

Hormonal treatment of slow growth is allowed. The age of 15 years indicates legal maturity even if sexual maturation is not complete. The rules of *hijaab* and male-female interaction are applied earlier in precocious growth to avoid transgression. Younger girls growing precociously are not married off because they are immature. Parents can consent on behalf of young children for urgent cosmetic surgery but should wait until children reach the age of consent for non-urgent surgery. Children are ordered to pray at the age of 7 and punished for missing prayer at the age of 10. Children who grow rapidly could be allowed to undertake some transactions if their cognitive skills are judged to be like those of adults.

Adolescence And Youth

Adolescent and youth behavioral problems are best resolved by preventive *tarbiyyat*. Intervention when they are already grown up is sometimes too late.

Old Age

The elderly, like the sick, are exempted from fulfilling all the acts and conditions of the physical acts of *'ibadat*, *salat*, *saum*, and *hajj*. They pray sitting down or lying on the side. They can make *tawaaf* carried by a person or a vehicle. They are exempted from the obligation of jihad and they can deny permission for their only son from joining jihad. In cases of urinary or fecal incontinence, they wear a retainer, made wudhu and pray immediately without waiting. Mental competence of the elderly is considered in marriage, divorce, transactions, evidence, and criminal liability. Both males and females experience sexual problems.

Modern Medicine
Fiqh al Mustajiddaat

Reproductive & Genetic Technology

- Assisted Reproduction
- Contraception
- Reproductive Cloning
- Abortion
- Other Technologies

Medical And Surgical Technologies

- Artificial Life Support
- Euthanasia
- Solid Organ Transplantation
- Change Of Fitra

Assisted Reproduction

Infertility

Infertility is considered a serious condition because it could lead to psychological distress, marital problems, and even marital failure. At the *ummatic* level widespread infertility could spell demographic weakness, a security threat. Causes of infertility may be natural, related to lifestyle, or complications of medical or surgical procedures. Traditional methods of treating male and female infertility may be medical or surgical. Treatment of infertility fulfils the purpose of *hifdh al nasl*

In Vivo Insemination, *al talqih al istinaa'e al daakhilii*

Artificial intra-uterine insemination with husband's sperm, *talqih sina'i dhaati* is permitted by the Law provided safeguards are taken to ensure that spermatozoa do not get mixed up in the laboratory or the clinic. The Law prohibits artificial in vivo insemination of a wife with donated sperm from a strange man or in vivo insemination of a strange woman with the husband's sperm, *talqih sinna'i ajnabi*.

In Vitro Fertilization, *al talqih al istinaa'e al khaariji*

The Law permits *in vitro* fertilization if the sperm and ovum are from legally wedded husband and wife and the zygote is implanted in the same wife. According to some jurists the Law permits *in vitro* fertilization if the sperm is from a husband and the ovum is from a legally wedded wife, and the zygote is implanted in a second wife of the husband. *In vitro* fertilization is prohibited if the sperm is from the husband and the ovum is from the wife and the zygote is implanted in a surrogate mother. A married woman cannot have a zygote implanted into her uterus if a sperm from a donor who is not her husband fertilized it. Sperm banks are a form of *zina* are not allowed. The Law prohibits implantation of a fertilized zygote in a wife if another woman donated the ovum and the sperm is from her husband or a strange man

Alternatives To IVF

Legal rulings are being formulated on other forms of assisted reproduction such as gamete intra-fallopian transfer, intracytoplasmic sperm injection, and futuristic technologies such as animal uterus, artificial uterus, male pregnancy, and embryo transfer. In general shari'at rulings are not promulgated for hypothetical situations that have not yet become widespread. The following alternatives to assisted reproduction can be considered: foster care, polygamy, open adoption, patience and *'ibadat*.

Ethical And Legal Issue

Several ethical issues arise in assisted reproduction: disclosure of infertility before marriage, artificial insemination after death of the husband, legality of masturbation for obtaining sperms, paternity and maternity of children born of illegal procedures, disposal and use of unused fertilized ova, sex selection and selective fetal reduction, embryo splitting, developing embryos for purposes other than their use in assisted reproduction, using embryos to produce a clone, using fetal gametes for fertilization, trans-species fertilization (mixing human and animal gametes), mixing of gametes or embryos of different parentage to confuse biological parentage, implanting the

embryo in a non-human species uterus, replacing the nucleus of the embryo, embryo flushing, commercial trading in sperms, gametes, or embryos, and use of gametes from cadavers.

Contraception

Fertility

Reproduction fulfils a human desire for self-perpetuation, enjoyment of children, and strengthening the *ummat*. Contraception negates these objectives and is undertaken for very strong reasons. Marrying and getting offspring are obligatory, *wajib*, for the community and fulfils the purpose of protecting and preserving progeny, *hifdh al nasl*. Procreation for the individual couple is *mubaah* or *mustahabb* in normal circumstances but becomes *wajib* in situations of military or economic weakness. There is basic permissibility of contraception from the hadith on coitus interruptus, *tarkhis fi al 'azal*. Decisions on contraception must be by mutual consent of the spouses. If contraception is a *dharuurat* for preserving the life of the mother, the husband's agreement is not required. Choice of the method of contraception must be based on the purposes of the Law (*hifdh al ddiin, hifdh al nafs, hifdh al 'aql, & hifdh al nasl*) and principles of the Law. There is no consensus among jurists on sterilization. Contraception as part of a national population control policy is prohibited by Law.

History Of Population And Birth Control

The motivations for population control at the community or national level are based on greed not to share wealth. There is no basis in Law for instituting population control as a community or national policy. Allah provides for all creatures and the argument that the resources of the earth are limited is not true. The problem in the world today is not limited resources but inequitable distribution of resources. Contraception was practised by past civilizations of ancient Egypt, ancient Greece, and the Roman Empire. Arabs in the pre-Islamic period used coitus interruptus, *'azl*. The sex revolution of the 1960s was made possible by the development of the contraceptive pill. Abortion was used in the past and

continues to be used by those who do not want to bear children and find themselves pregnant. Pharaonic Egypt instituted a population control policy when the number of Banu Israil increased. Selective infanticide of boys was carried out. Ethnic cleansing and other forms of genocide have been a characteristic of the 20th century and are likely to continue into the next century.

Male Contraception

The permissible reversible methods for males are the condom, *coitus saxanicus*, *coitus reservatus*, and *coitus interruptus*.

Female Contraception

Permissible reversible methods for females are either mechanical (the diaphragm, the cervical cap, the vaginal sponge) or chemical (spermicides, oral contraceptive pills). Some forms of IUD are not permitted because they cause early abortion. The safest and perhaps the least effective is the rhythm method

Socio-Demographic Impact

Availability of safe contraception removes the fear of pregnancy and encourages sexual promiscuity. It also encourages temporary sexual unions devoid of child responsibilities. Wide spread use of contraception will eventually cause population imbalance by age and gender. Widespread practice of birth control makes it easier to accept and practice genocide by decreasing respect for human life.

Reproductive Cloning

Background To Cloning

Cloning was achieved in sheep. It seems technically feasible in humans. It is not creation of new life from basic organic and non-organic matter since creation of life *de novo* is the prerogative of Allah alone. Cloning is a form of asexual reproduction that is common in plants and animals. Adam and Isa were humans from asexual reproduction. Cloning is a form of reproduction without male-female interaction. The clone is

the exact replica of original. Genetic recombination's that are responsible for the great variety of normal reproduction do not occur in cloning. The Islamic tradition discourages speculative thinking about hypothetical events. Issues are discussed from the legal and ethical aspects after they have occurred. We therefore cannot engage in a detailed discussion of cloning until it has occurred and we see its implications in practice. The issue of quality of life arises in the case of cloning if ever it becomes a reality. The product of cloning will not have the same quality, as we know it in humans today. This is because a human is both matter and spirit. During the first trimester of intra-uterine development the soul, Allah inserts *ruh* into the body. There is one *ruh* for each being. Thus the cloned product cannot have a *ruh* and will therefore not be human being, as we know. The product of cloning will have all the biological properties of the ordinary human being but will not have the spiritual qualities. Thus the life of the cloned product will be of little or no quality. We can only speculate how that cloned product will behave. The possibilities are frightening as the brave new world of biotechnology unfolds.

Medical Benefits

Cloning has some medical benefits such as supply of organs for transplantation

Medical Dangers

Cloning may lead to new diseases and medical problems.

Legal –Ethical Implications

The major ethical issues in cloning are: loss of human uniqueness and individuality, hazardous unexpected products from cloning, and criminal misuse of the cloning technology. Legal issues will arise in inheritance of the real son and the cloned son.

Socio-Demographic Implications

Likely socio-demographic implications are loss of human dignity, production of human monsters with no family background, and destruction of lineage, *nasab*.

Abortion

‘Unwanted Pregnancy’: Conceptual Issues

The issue of ‘unwanted pregnancy’ is a recent concept in human history and is associated with social stresses of modern life. The purposes of the law, *maqasid al shari’at*, and its principles, *qawa'id a shari'at*, focus on preventing ‘unwanted pregnancy’, protecting the rights of the fetus and infant, and mitigating the adverse effects of ‘unwanted pregnancy’ by social measures.

Determinants And Causes Of ‘Unwanted Pregnancy’

‘Unwanted pregnancy’ is associated with general social determinants (hedonistic life styles, sexual transgression, addiction to drugs, fear of poverty, and low female status) and specific antecedent causes (sexual crimes, egoistic greed, maternal/fetal disease, and gender discrimination).

The Law On Feticide And Infanticide

Life is sacred. All lives have equal worth whether in utero or in terminal illness. Taking the life of any one person without legal justification is like killing the whole human race (5:22). Illegal feticide and infanticide are committed for various reasons: avoiding consequences of sexual immorality, poverty, rape, gender preference, and serious disease of the mother and child. Abortion is criminal homicide because life is considered to start at conception and not as claimed at ensoulment. Abortion is immoral because it encourages sexual immorality and promiscuity without fear of pregnancy. Abortion is the lesser of two evils in cases of serious maternal disease because one life is lost instead of two. In all forms of abortion whether legal or illegal, the aborted fetus must be treated with respect. It must be washed, shrouded, and buried properly. The Law prescribes severe punitive measures for causing abortion of a fetus. *Diya* is paid if the fetus comes out with signs of life and dies thereafter. *Ghurrat*, which is less than *diya*, is paid if the fetus comes out dead. The physician or any other accessory to abortion is guilty of the offense of causing abortion even if either or both parents consented to the procedures. Infanticide

can be in the form of child neglect and child abuse. Social injustice manifesting as poverty is responsible for a lot of feticide and infanticide. Poor mothers who do not get adequate nutrition and medical care have a higher rate of fetal loss and poor pregnancy outcomes. Their children are born pre-mature of small for gestation age and succumb easily to disease and die. Children born in poor families and communities have higher morbidity and mortality.

Prevention Of 'Unwanted Pregnancy'

It is prevented by sexual hygiene, marriage, contraception, deterring sexual crimes, and raising the status of women.

The Law And Adverse Consequences Of 'Unwanted Pregnancy'

The adverse sequelae of 'unwanted pregnancy' (feticide, infanticide, or child abuse and neglect) can be prevented by defending the basic human right of the fetus and infant to life, promoting social institutions for child welfare (nuclear family, extended family, foster care, and open adoption). Closed adoption is forbidden by law but care in a foster home is allowed and is encouraged if the nuclear and extended families are unwilling or are unable to care for children. Abortion at any stage of pregnancy is a crime against humanity. It is not a solution to the problem but is part of the problem. It will encourage more 'unwanted pregnancies'.

Other Reproductive Technologies

Sex Selection And Sex Change, *al tahakkum fi al jins*

Sex preference is natural. Gender selection is by Allah (shura: 49) and no human efforts will contradict Allah's will. Human efforts can only succeed if Allah wills so. Efforts to get an offspring of a particular gender are in general permissible because the *dua* that prophets made are considered part of the effort. Discussion *centers* on the methods used because some are permitted while others are prohibited. Natural methods (selecting days of copulation before and after ovulation & changing upper vaginal chemistry artificially) are not effective. Rulings methods are still being discussed such as Separation of male and female sperms by centrifuging and in vitro

insemination, gender pre-selection and implanting only zygotes of desired gender in in vitro fertilization, sex change by genetic engineering, exposure of fetuses to specific hormones, and sex change operations for hermaphrodites. Some jurists consider sex selection permissible for the couple but are prohibited when they are part of community or national policy. There are long-term consequences that must be considered. Severe gender imbalance will threaten marriage and lead to family breakdown. Eventually the purpose of the law to preserve progeny, *hifdh al nasl*, cannot be fulfilled.

Genetic Testing

Genetic testing is used for disease diagnosis, pre natal diagnosis, genetic screening, criminal investigations, and settling paternity issues.

Genetic Counseling

Counseling is carried out before and after genetic testing. The objective of counseling before testing is to provide information about the genetic disorders and the risks of disease to individuals and families so that they may make informed decisions. It also provides information about the genetic test (reliability, validity, and method of testing). Pre marital counseling is recommended for close relatives. Genetic testing can be carried only if there is informed consent of competent adults. Genetic data is confidential and cannot be disclosed except following guidelines. Genetic information can be misused to stigmatize individuals, families and entire ethnic groups. Genetic data of an individual discloses genetic information about other members of the family. Genetic data should not be released to third parties without agreement of the subject tested. Genetic data can be misused for discrimination in employment and insurance.

Life Support

Legal Definitions Of Terminal Illness And Death

Terminal illness is defined as illness from which recovery is not expected. The manner in which death is defined affects the ruling, *hukm*, about life support. The following are various

definitions of death: (a) traditional: cardio-respiratory arrest (b) Whole-brain death (c) Higher brain death. If death is defined in the traditional way, life support cannot be withdrawn at any stage. If the definition of higher brain death is accepted, life support will be removed from persons who still have many life functions (like respiration, circulation, sensation). The question of quality of life is also raised in the definition of life. The assumption is that there must be some quality to human life for it to be worth living. The exact definition of quality is still elusive. It is argued that euthanasia saves the terminally ill from a painful and miserable death. This considers only those aspects of the death process that ordinary humans can perceive. We learn from the Qur'an that the death of non-believers is stressful in the spiritual sense. Believers can have a good death even if there is pain.

Palliative Care

The aim of palliative care is good death which includes: pain control, psychological support, emotional support, and spiritual support. Death can be made a pleasant experience. Palliative care was traditionally in the family but it has recently moved to institutions. Lessons about palliative care can be learned from the terminal illness of the prophet and his companions. The Quran has taught the etiquette of caring for old parents.

Principles Of Certainty And Autonomy

Since the definition of death and the exact time of its occurrence are still matters of dispute, a major irreversible decision like withdrawing life support cannot be taken. Islamic law strictly forbids action based on uncertainty, *shakk*.

The Purposes Of Life And Wealth

The purpose of preserving life may contradict the purpose of preserving wealth. Life comes before wealth in order of priorities. This however applies to expenditure on ordinary medical procedures and not heroic ones of doubtful value because that would be waste of wealth, *israaf*, that has been condemned.

Legal Rulings On Initiating And Withdrawing Life Support

The patient's choices about food and medical treatment may contradict the purpose of preserving life. Where life is under immediate threat, the patient's desires may be overridden. The terminally ill patient, who takes a major risk, should make the final informed decisions after clarification of the medical, legal, and ethical issues by physicians and *fuqaha*. The family may request that life support be terminated if the patient is in pain or coma. Self-interest may motivate some members of the family and others with personal interest to hasten the legal death of the terminally ill patient. According to Islamic law, any inheritor who plays any role direct or indirect in the death of an inheritee cannot be an inheritor, *mirath al qaatil*. It is therefore impossible for any member of the close family to take part in euthanasia decisions. Physicians and other health care givers may abuse euthanasia and kill whom they want. They could be bribed to kill people by either family members or others.

Euthanasia

Concepts

Euthanasia is carried out illegally for patients in persistent vegetative states or those in terminal illness with a lot of pain and suffering. Active euthanasia, an act of commission that causes death, is taking some action that leads to death like a fatal injection. Passive euthanasia, an act of omission, is letting a person die by taking no action to maintain life. Terminal sedation has the dual effect of controlling pain and causing respiratory failure. Islamic Law views all forms of euthanasia, active and passive, as murder. Those who give advice and those who assist in any way with suicide are guilty of homicide. A physician is legally liable for any euthanasia actions performed even if instructed by the patient.

Analysis Using Purposes Of The Law, *maqasid al shariat*

Euthanasia violates the Purpose of the Law to preserve Life by taking life. It violates the purpose of religion by assuming Allah's prerogative of causing death. It violates the purpose of

preserving progeny by cheapening human life making genocide more acceptable.

Analysis Using Principles Of The Law, *qawaid al shari'at*

According to the principle of intention, there is no distinction between active and passive euthanasia because the end-result is the same. The principle of injury makes euthanasia illegal because it tries to resolve the pain and suffering of terminal illness by causing a bigger injury which is killing. Continuation of pain in terminal illness is a lesser evil than euthanasia. Prohibition of euthanasia closes the door to corrupt relatives and physicians killing patients for the sake of inheritance by claiming euthanasia. Euthanasia reverses the customary role of the physician as a preserver into a destroyer of life. A distinction in law exists between withholding life support and withdrawing it. The issue is legally easier if life support is not started at all according to a pre-set policy and criteria. Once it is started, discontinuation raises legal or ethical issues. The principle of the law that applies here is that continuation is excused where commencing is not. Continuation is easier than starting. Euthanasia like other controversial issues is better prevented than waiting to resolve its attendant problems. The patient cannot legally agree to termination of life because life belongs to Allah and humans are mere temporary custodians. The determination of *ajal* is in the hands of Allah. A patient who has legal competence, *ahliyyat*, makes final decisions about medical treatment and nutritional support. Patients in terminal illness often lose *ahliyyat* and cannot make decisions on their treatment. A living will is a non-binding recommendation and it can be reversed by the family. They however cannot make the decision for euthanasia.

Historical Precedents

The prophet condemned as a hypocrite a man who killed himself because of severely painful battle wounds

General Conclusions

Our analysis has shown that there is no legal basis for euthanasia. Physicians have not right to interfere with *ajal* that was fixed by Allah. Disease will take its natural course until death. Physicians for each individual patient do not know this

course. It is therefore necessary that they concentrate on the quality of the remaining life and not reversal of death. Life support measures should be taken with the intention of quality in mind. Instead of discussing euthanasia, we should undertake research to find out how to make the remaining life of as high a quality as is possible. The most that can be done is not to undertake any heroic measures for a terminally ill patient. However ordinary medical care and nutrition cannot be stopped. This can best be achieved by the hospital having a clear and public policy on life support with clear admission criteria and application to all patients without regard for age, gender, SES, race, or diagnosis.

Solid Organ Transplantation

Background

The first organs involved in transplantations were the skin, the bone, the teeth, and the cornea. Later kidney, heart, lung, and liver transplants were achieved. Glandular and neurohumoral organs will be transplantable in the future. Transplantation decisions are a balance between risk and benefit. Ethical and legal problems of transplantation are temporary, they will disappear with the use of xenografts, artificial organs, and cloned organs.

Legal Rulings About Transplantation

Uses of textual, nass, evidence has limited success because the issues involved in transplantation are new and were not dealt with before. General Purposes of the Law, *maqasid al sharia*, and the General Principles of Fiqh, *al qawaid al fihiyyat* are the more appropriate tools. The main guide about transplantation is the purpose of maintaining life of the donor and the recipient. Under the principle of hardship, necessity and hardship legalize what would otherwise be objectionable or risky lowering donor risk has precedence over benefit to the recipient the complications and side-effects to the recipient must be a lesser harm than the original disease. Under the principle of injury, transplantation relieves an injury to the body in as far as is possible but its complications and side-

effects should be of lesser degree than the original injury. Abuse of transplantation by abducting or assassinating people for their organs could lead to complete prohibition under the principles of dominance of public over individual interest prevention of harm has priority over getting a benefit and preempting evil. Under the principle of custom brain death does not fulfill the criteria of being a widespread, uniform, and predominant customary definition of death that is considered a valid custom. The successes of biotechnology in transplantation and other fields introduce a strong doubt in the irreversibility of brain death. Under the principle of certainty: existing customary definition of death should continue in force until there is compelling evidence otherwise. Selling organs could open the door to criminal commercial exploitation and may be forbidden under the purpose of maintaining life, the principle of preventing injury, the principle of closing the door to evil and the principle of motive. Protecting innocent people from criminal exploitation is a public interest that has priority over the health interests of the organ recipient. Principle of motive will have to be invoked to forbid transplantation altogether if it is abused and is commercialized for individual benefit because the purpose will no longer be noble but selfish. Matters are to be judged by the underlying motive and not the outward appearances. Other considerations in transplantation are free informed consent, respect for the dignity of the human ownership and sale of organs, taharat of the organs, sadaqat, and iithaar. The following issues have been resolved: use of animal organs, use of artificial organs, autotransplantation, transplantation from a living donor. Organs from prisoners condemned to death can be used provided there is dharuurat. The evidence for transplantation from a human donor, living or dead, is by qiyaas with permission to eat flesh of a dead person in case of dharuurat

Indications, Side Effects, And Complications

The indications of transplantation are irreversible organ failure and sub-optimal organ function. Transplantation on the basis of preventive maintenance of organs in good condition is not allowed. The associated side effects and complications of

immune suppression, infection, neoplasia, graft rejection, and drug toxicity are treated under 2 principles of the Law: hardship, *mashaqqa*, and injury, *dharar*.

Procuring And Harvesting Organs

The demand for organs is more than the supply. Human organs could be obtained either as voluntary gifts or voluntary sale. The donor may be living or may be dead. Living donors could be free persons or prisoners condemned to death. Harvesting organs from an individual without his or her free consent is not allowed by the law.

Definition And Timing Of Death

The customary definition of death is based on cardiac arrest, respiratory arrest, and late signs such as rigor mortis and loss of body heat due to cessation of metabolism. The modern definition is based on signs of brain death. The customary definition of death would preclude transplantation altogether because by the time a person is certified dead, the organs have already started deteriorating. Definition of death as brain death is not yet widespread and is still controversial. There is uncertainty that organs are being harvested from a living person who is thereby killed. The motive behind using brain death as a definition of death is also questionable. It could be argued that the need to harvest organs is behind the adoption of brain death as a definition of death. Under the principle of closing the door to evil, we may have to consider that using brain death as a definition of death will make it conducive to organized crime to assault people so that they are declared brain dead and their organs are legally removed.

Change Of Fitra

The Concept Of Change Of Allah's Creation

The Qur'an mentions stability of creation (30:30) and stability of Allah's laws (35:43). The unchanging creation mentioned is constancy of the laws that govern the universe, *sunan*, as expounded in the Qur'an (35:43). Change is allowed if it follows the Laws. Any changes that do not follow these laws are repudiated. Desire to undertake reconstructive or cosmetic

surgery arises out of dissatisfaction with defects and the associated embarrassing appearance. The defects are due to injuries that according to the principle of injury must be removed. Thus technology to remove or correct defects is not opposing or denying Allah's creation. A serious issue of '*aqida*' would arise if a human were to be dissatisfied with Allah's primary creation because it is optimal and perfect. Humans cannot conceptualize a better creation that they then prefer. Deliberate effort to change Allah's primary creation without valid reasons is due to *shaitan*. There is risk in tampering with *fitra* without following the *sunan*.

Beautification

Allah made humans in a perfect image. He however also allowed them to enhance their physical appearance by wearing clothes, using perfumes. These measures improve appearance do not change *fitra*. Humans in disobedience undertake other forms of beautification that change basic *fitra* or do not follow the *sunan*. Prohibited procedures are tattooing, shortening teeth, widening gaps between teeth, and plucking eyebrows. Circumcision is an allowed procedure although it involves change of *fitra*. Male circumcision is *mustahabb* and is recommended on hygienic grounds. Opinions differ about female circumcision. Fraudulent procedures that are prohibited are wearing wigs, dyeing hair to hide age, and hymenal reconstruction. There are other forms of beautification. Increasing body weight and changing body shape by dieting is common and was practiced by women at the time of the prophet without objection.

Reconstructive/Restorative Surgery

Reconstructive/restorative surgery is carried out to correct natural deformities, deformities due to disease, and deformities due to complications of disease treatment. Malformations may be congenital or acquired. The distinction is not important because many of the congenital malformations are due to environmental factors operating in utero. The purposes of surgery on congenital malformations are: restoration of the normal appearance to relieve psychological pressure &

embarrassment and restore function. These purposes do not involve change of *fitra* but restoration of *fitra* to its state before the injury. Similarly restorative surgery for deformities due to disease or treatment do not involve change of *fitra* since they are returning to the normal. Surgery for hiding identity of a witness is allowed. A surgical operation to reveal the true gender of an apparent hermaphrodite is not change of *fitra* but an attempt to restore *fitra* altered by hormonal or chromosomal damage. Such operations have another objective of trying to preserve or restore the reproductive function.

Cosmetic Surgery

Cosmetic surgery has a sole purpose of enhancing beauty with no medical or surgical indication. It can fulfill the purpose of preserving progeny, *hifdh al nasl*, if carried out for beautification in order to find a marriage partner. Expensive cosmetic surgery violates the purpose of preserving wealth, *hifdh al maal*. It violated the principle of preservation of religion, *hifdh al ddiin* if carried out with the belief that Allah's creation was ugly. Under the principle of motive, *qasd*, we look at each individual case of cosmetic surgery and judge it based on the intention. As mentioned above a simple cosmetic surgery operation may lead to the noble purpose of marriage. We however must consider the benefits of cosmetic surgery against its harm under the principle of injury. The Law gives priority to prevention of injury over accruing a benefit. The principle of hardship cannot be applied to cosmetic surgery because there is no life-threatening situation necessity to justify putting aside normal prohibitions. Pursuit of beauty is not necessary for life and good health. Beauty is in any case a nebulous intangible entity that is very subjective.

Medical Ethics

Akhlaq al Tibb

Purposes, Principles, and Regulations of Medicine

- Purposes And Principles of Medicine, *maqasid wa qawa'id al tibb*
- Regulations of Medical Procedures, *dhawaabit al tatbiib*
- Regulations of Research Procedures, *dhawaabit al bahath*
- Regulations of Physician Conduct, *dhawaabit al tabiib*
- Regulations on Professional Misconduct, *dhawaabit al inhiraaf al mihani*

Physician Etiquette, *adab al tabiib*

- Etiquette With Patients and Families
- Etiquette With The Dying
- Etiquette With The Health Care Team
- Etiquette of Research on Animals
- Etiquette of Research on Humans

Purposes and Principles of Medicine

Introduction

Islamic Law is comprehensive. It is a combination of moral and positive laws. Secularized European law denies moral considerations associated with 'religion'. Its failure to solve issues in modern medicine that required moral considerations led to the birth of the discipline of medical ethics. Muslims do not have a special discipline on medical ethics because medical ethical and moral issues are encompassed within Islamic Law. Concern with moral issues in medicine increased in the recent past due to new medical technology and increase in moral violations by medical practitioners. Europeans have written recently about ethics. In 1976 Beauchamp's and Childress wrote authoritatively about ethical theory and ethical principles. The following international declarations covered legal medical issues from a European world-view: Declaration

of Geneva, International Code of Medical Ethics, Declaration of Tokyo, Declaration of Oslo, and Declaration of Helsinki. Muslims did not need to publish any new declarations because principles of legal medicine are found within the Islamic Law. Islamic Law incorporates moral principles directly applicable to medicine.

European Ethics

There are three European approaches to ethical analysis: normative (what ought to be done) or practical (what most people do), and non-normative (what is actually going on). Europeans have a problem dealing consistently with moral issues after removing religion from public life over the past 5 centuries of secularism. Morality became communal consensus about what is right and what is wrong. Thus ethics became relative and changeable with change of community values. European law does not follow a consistent moral guideline. It does not automatically ban all what is immoral and does not automatically permit all what is moral.

There is no one coherent European theory of ethics because of the historical background. During the Roman Empire a marriage of convenience held between Judeo-Christian concepts and pagan Greco-roman concepts. The marriage was strained by a partial return of Europeans to their Greco-Roman heritage and marginalization of the Christian Church starting with the renaissance and reformation through the enlightenment, modernism and now post modernism. In these circumstances it was difficult to define one coherent European ethical theory. Beauchamp and Childress listed eight European ethical theories none of which can on its own explain all ethical or moral dilemmas. These theories can be listed as the utilitarian consequence-based theory, the Kantian obligation-based theory, the rights-based theory based on respect for human rights, the community-based theory, the relation-based theory, and the case-based theory.

There are 4 basic European ethical principles according to Beauchamp and Childress (1994) are: autonomy, beneficence, non maleficence, and justice.

Islamic Ethics

Morality in Islam is absolute and is of divine origin. The Law is the expression and practical manifestation of morality. It automatically bans all immoral actions as haram and automatically permits all what is moral or is not specifically defined as haram. The Islamic approach to ethics is a mixture of the fixed absolute and the variable. The fixed and absolute sets parameters of what is moral. Within these parameters, consensus can be reached on specific moral issues. Islam considers medical ethics the same as ethics in other areas of life. There is no need for a special code for physicians. Islamic medical ethics is restating general ethical principles using medical terminology and with medical applications. The ethical theories and principles are derived from the basic law but the detailed applications require further *ijtihad* by physicians.

Islam has a parsimonious and rigorously defined ethical theory of Islam based on the 5 purposes of the Law, *maqasid al shari'at*. The five purposes are preservation of ddiin, life, progeny, intellect, and wealth. Any medical action must fulfill one of the above purposes if it is to be considered ethical.

The basic ethical principles of Islam relevant to medical practice are derived from the 5 principles of the Law are: intention, *qasd*; certainty, *yaqeen*; harm, *dharar*. The Islamic principles are wider in scope and deeper than the European principles.

Purposes Of Medicine

Protection Of Ddiin

Protection of ddiin is essentially involves ibadat in the wide sense that every human endeavor is a form of ibadat. Thus medical treatment makes a direct contribution to ibadat by protecting and promoting good health so that the worshipper will have the energy to undertake all the responsibilities of ibadat. The principal forms of physical ibadat are the 4 pillars of Islam: prayer, *salat*; fasting, *siyaam*; pilgrimage, *hajj*, and jihad. A sick or a weak body can perform none of them properly. Balanced mental health is necessary for

understanding aqidat and avoiding false ideas that violate aqidat. Thus medical treatment of mental disorders thus contributes to ibadat. General public health has a special relation to jihad. If the general health of a population is not satisfactory, there will not enough youths to be recruited into the armed forces. There will also not be enough healthy workers to provide the material and logistics required for successful prosecution of war. If the obligation of jihad is not fulfilled, the Muslim community will be defeated and subjugated by others who will not give Muslims freedom to practice religion.

Protection Of Life, *hifdh al nafs*

The primary purpose of medicine is to fulfill the second purpose of the shari'at, the preservation of life, *hifdh al nafs*. Medicine cannot prevent or postpone death since such matters are in the hands of Allah alone. It however tries to maintain as high a quality of life until the appointed time of death arrives. Medicine contributes to the preservation and continuation of life by making sure that the nutritional functions are well maintained. Medical knowledge is used in the prevention of disease that impairs human health. Disease treatment and rehabilitation lead to better quality health.

Protection Of Progeny, *hifdh al nasl*

Medicine contributes to the fulfillment of this function by making sure that children are cared for well so that they grow into healthy adults who can bear children. Treatment of infertility ensures successful child bearing. The care for the pregnant woman, perinatal medicine, and pediatric medicine all ensure that children are born and grow healthy. Intra-partum care, infant and child care ensure survival of healthy children.

Protection Of The Mind, *hifdh al 'aql*

Medical treatment plays a very important role in protection of the mind. Treatment of physical illnesses removes stress that affects the mental state. Treatment of neuroses and psychoses restores intellectual and emotional functions. Medical treatment of alcohol and drug abuse prevents deterioration of the intellect.

Protection Of Wealth, *hifdh al mal*

The wealth of any community depends on the productive activities of its healthy citizens. Medicine contributes to wealth generation by prevention of disease, promotion of health, and treatment of any diseases and their sequelae. Communities with general poor health are less productive than a healthy vibrant community. The principles of protection of life and protection of wealth may conflict in cases of terminal illness. Care for the terminally ill consumes a lot of resources that could have been used to treat other persons with treatable conditions. The question may be posed whether the effort to protect life is worth the cost. The issue of opportunity cost and equitable resource distribution also arises.

Principles Of Medicine

The Principle Of Intention

The Principle of intention comprises several sub principles. The sub principle that each action is judged by the intention behind it calls upon the physician to consult his inner conscience and make sure that his actions, seen or not seen, are based on good intentions. The sub principle 'what matters is the intention and not the letter of the law' rejects the wrong use of data to justify wrong or immoral actions. The sub principle that means are judged with the same criteria as the intentions implies that no useful medical purpose should be achieved by using immoral methods.

The Principle Of Certainty, *qaidat al yaqeen*

Medical diagnosis does cannot reach the legal standard of yaqeen. Treatment decisions are best on a balance of probabilities. Each diagnosis is treated as a working diagnosis that is changed and refined as new information emerges. This provides for stability and a situation of quasi-certainty without which practical procedures will be taken reluctantly and inefficiently. Existing assertions should continue in force until there is compelling evidence to change them. Established medical procedures and protocols are treated as customs or precedents. What has been accepted as customary over a long

time is not considered harmful unless there is evidence to the contrary. All medical procedures are considered permissible unless there is evidence to prove their prohibition. Exceptions to this rule are conditions related to the sexual and reproductive functions. All matters related to the sexual function are presumed forbidden unless there is evidence to prove permissibility.

The Principle Of Injury, *qaidat al dharar*

Medical intervention is justified on the basic principle is that injury, if it occurs, should be relieved. An injury should not be relieved by a medical procedure that leads to an injury of the same magnitude as a side effect. In a situation in which the proposed medical intervention has side effects, we follow the principle that prevention of a harm has priority over pursuit of a benefit of equal worth. If the benefit has far more importance and worth than the harm, then the pursuit of the benefit has priority. Physicians sometimes are confronted with medical interventions that are double edged; they have both prohibited and permitted effects. The guidance of the Law is that the prohibited has priority of recognition over the permitted if the two occur together and a choice has to be made. If confronted with 2 medical situations both of which are harmful and there is no way but to choose one of them, the lesser harm is committed. A lesser harm is committed in order to prevent a bigger harm. In the same way medical interventions that in the public interest have priority over consideration of the individual interest. The individual may have to sustain a harm in order to protect public interest. In the course of combating communicable diseases, the state cannot infringe the rights of the public unless there is a public benefit to be achieved. In many situations, the line between benefit and injury is so fine that salat al istikharat is needed to reach a solution since no empirical methods can be used.

Principle Of Hardship, *qaidat al mashaqqat*

Medical interventions that would otherwise be prohibited actions are permitted under the principle of hardship if there is a necessity. Necessity legalizes the prohibited. In the medical setting a hardship is defined as any condition that will seriously impair physical and mental health if not relieved promptly. Hardship mitigates easing of the sharia rules and obligations. Committing the otherwise prohibited action should not extend beyond the limits needed to preserve the Purpose of the Law that is the basis for the legalization. Necessity however does not permanently abrogate the patient's rights that must be restored or recompensed in due course; necessity only legalizes temporary violation of rights. The temporary legalization of prohibited medical action ends with the end of the necessity that justified it in the first place. This can be stated in an alternative way if the obstacle ends, enforcement of the prohibited resumes/It is illegal to get out of a difficulty by delegating to someone else to undertake a harmful act.

The Principle Of Custom or Precedent, *qaidat al urf*

The standard of medical care is defined by custom. The basic principle is that custom or precedent has legal force. What is considered customary is what is uniform, widespread, and predominant and not rare. The customary must also be old and not a recent phenomenon to give chance for a medical consensus to be formed.

Regulations Of Medical Procedures, *dhawaabit al tibaabat*

Examination And Investigation

Patient consent is necessary for history taking otherwise it is considered trespassing on privacy and spying. History taking provides an opportunity to discuss diseases of the heart that underlie physical disease. It is an opportunity for taubat and dawa. It is also opportunity to advise on legal matters such as foster relations and iddat. The physician is not obliged to report criminal information to the authorities unless there is demonstrable immediate public interest and necessity. Physical

clinical examination also requires informed consent. A patient can only be examined against his or her consent only if there is a necessity relating to the life of the patient or to public interest such as criminal investigation. Mental patients can be not legally competent to give consent; the necessary consent could be obtained from a guardian, *wali*. Examination by a caregiver of the opposite gender requires special consideration. It is always preferable that physicians of the same gender carry out the examination. A physician of the opposite gender can be used only if a situation of necessity arises. A chaperone must be present. Examination limited to what is necessary. The results of laboratory investigations have the same requirements for confidentiality as history and clinical examination. The results of radiological investigations are confidential. Images that show the shape of the body parts can be considered showing *awrat* and should not be seen except by authorized people only and for specific purposes. Invasive investigations carry a higher risk to the patient; their benefits should be carefully weighed against the benefits. These investigations should be carried out only if there is a clear necessity, *dharuurat*.

Medical Treatment

Medical treatment may involve destruction (antibiotics, cytotoxics, anti-metabolites, antagonists, antitoxins, and detoxification), replacement (hormones, fluids, electrolytes), biological modification & modulation, psycho-active therapy, and supportive treatment (diet, rest, analgesia etc). It is prohibited to use haram materials and najasat as treatment. What is prohibited as food or drink is also prohibited as medicine. Exceptions are made in cases of *dharuurat*. Medicine taken orally does not nullify wudhu. Any medicine that is taken but is not swallowed and is vomited out is considered like vomitus. Medicine given per rectum nullifies wudhu. Subcutaneous or intravenous or intramuscular injections do not nullify wudhu unless there is extensive external bleeding. Any medicine taken orally or rectally or any insertion of a scope will nullify saum.

Surgical Treatment

Permitted surgical procedures include resection, restorative/reconstructive surgery, transplantation, blood transfusion, anesthesia, and critical care. Transfusion of whole blood or blood components is widely accepted and raises few legal or ethical issues. Blood donation is analogous to organ donation by a living donor. Transfused blood is not considered filth, *najasad*, because it is not spilled blood. Blood transfusion is allowed on the basis of *dharuurat*. There is no problem in blood donation between Muslims and non-Muslims because they share human brotherhood. There is no problem in blood transfusion between a man and a woman. Blood transfusion does not abrogate the wudhu of the donor or the recipient. Sale of blood is permitted using the analogy of sale of milk by wet nurse who is paid for her services. Attempts must be made to minimize inappropriate mixing of male and female health care personnel in a small confined space of the operating theater. In emergency treatment/critical care, financial considerations complicate the picture when destitute patients who cannot pay present at the emergency room.

Other Treatments

Dua, ruqyah, tawakkul, and raja are spiritual treatments. Immunization and other preventive measures are treatment before disease and are not denial of qadar. It is permitted to slaughter on behalf of the sick *taqarruban ila al llaah* and to give the poor. It is prohibited to slaughter for the jinn and the shaitan. Various traditional, alternative, and complementary therapies are permitted if they are of benefit. Other permitted treatment modalities are irradiation, immunotherapy, and genetic therapy.

Research: Theory, Practice, and Policy

Research In Islam

Islam puts emphasis on seeking knowledge. The search for knowledge is a difficult but necessary process as we learn from the story of Musa and the righteous man. Islam encourages benefitting and using knowledge. There is no consideration for

knowledge not accompanied by practical application. Tadabbur involves critical observation and consideration of information. Tadabbur involves critical consideration of information. Humans are encouraged to derive empirical knowledge from observation of the earth and their own bodies. The observation referred to is serious and deliberative, *al nadhar bi al tadabbur*. Tadabbur is required even with the holy text of the Qur'an. Thought can be based on empirical observation. The observation can be of the earth. It can also be by observation of the human body. Islam encourages active intellectual effort in looking for knowledge. The process of *ijtihad* is exertion of maximum intellectual effort to discover the truth or understand the relation between truths. *Ijtihad* is also used to discover and identify falsehoods. There are parallels between the tools of *ijtihad* used by classical Muslim scholars and the processes of reaching conclusions in modern scientific research. The process of inductive logic used in medical research is the same as *qiyaas usuuli* used by scholars of the methodology of the Law. The process of reaching a scientific consensus is similar to the process of scholarly consensus. The prophet taught that there is a cure for every disease. There is an injunction to search for cures by processes of medical research.

Research Practice

The Ethics committee approves research proposals and protocols that have ethical implications. It ensures the highest ethical standards in any research and protection of research subjects as stipulated in the Helsinki declaration, and protection of researchers from committing mistakes that lead to criminal prosecution. It monitors the conduct of the study to detect any ethical violations. Membership should include major medical and surgical specializations, hospital physicians, hospital nursing staff, general practitioners, pharmacists, statisticians, ethicists, and lay persons from the community. All genders and age groups must be represented. The research application form consists of the following: identifying information, description of the research, protocol and dates, methodology of research, and ethico-legal issues. The

patient/volunteer information sheet provides information on the research: purposes, procedures, duration, risks, benefits, and ethico-legal issues. The informed consent form ensures that the research subject understands the research and voluntarily agrees to participate. A confidential questionnaire for research subjects should include questions on the adequacy of the information sheet and voluntary consent. A confidential review questionnaire for researchers should include items about: start and end of the study, protocol amendments, progress of recruitment, provision of information, obtaining consent, withdrawal of consent, adverse events, and outcome of research.

Research Policy

Research is a departure from the commonly accepted treatment. Recruitment into studies should reflect the community's ethnic, gender, and age distribution. Results of an unbalanced study may not be applicable to all groups. Decisions on research priorities may be made on a scientific basis or a non-scientific basis (political, socio-cultural, elite interests). The source of funding may in an indirect and discreet way influence the conduct of research and the report of its findings thus leading to lack of objectivity. Islam enjoins dissemination of knowledge. Islam encourages dissemination of research findings by teaching or publication. Islam prohibits hiding knowledge. Drug companies that sponsor research to develop patentable products do not appreciate the type of transparency advocated by Islam. Publication of research results serves scientific communication and scientific networking. Concern about copyright and intellectual property rights limits dissemination of knowledge by publication. Biases in publication arise at the level of researchers who normally do not submit negative studies for publication. Editors prefer publishing positive studies. Biases in selection of papers for publication arise from the peer review process due to old boy networks. Despite the best of efforts to police itself, the scientific research community still has cases of research fraud.

Fraud manifests as cooking or doctoring data, selective reporting of data, suppression of negative information, and 'stealing' others' work. Financial gain, reputation, and the pressure to publish or perish are the driving forces behind fraud.

Regulations Of Physician Conduct, *dhawaabit al tabiib*

Values, Competence, And Responsibility

The physician-patient is based on brotherhood. The physician must maintain the highest standards of justice. He should also follow the following guidelines from the sunnat: good intentions, avoiding doubtful things, leaving alone matters that do not concern him, loving for others, causing no harm, giving sincere advice, avoiding the prohibited, doing the enjoined acts, , renouncing greed, avoiding sterile arguments, respect for life, basing decisions and actions on evidence, following the dictates of conscience, righteous acts, quality work, guarding the tongue, avoiding anger and rage, respecting transgressing Allah's limits, consciousness of Allah in all circumstances, performing good acts to wipe out bad ones, treating people with the best of manners, restraint and modesty, maintaining objectivity, seeking help from Allah, and avoiding oppression or transgression against others. The physician should be professionally competent (*itiqan & ihsaan*), balanced (*tawazun*), have responsibility (*amanat*) and accountability (*muhasabat*). He must work for the benefit of the patients and the community (*maslahat*).

Medical Decisions

No medical procedures can be carried out without informed consent of the patient except in cases of legal incompetence. The patient has the purest intentions in decisions in the best interests of his or her life. Others may have bias their decision-making. The patient must be free and capable of giving informed consent. Informed consent requires disclosure by the

physician, understanding by the patient, voluntariness of the decision, legal competence of the patient, recommendation of the physician on the best course of action, decision by the patient, and authorization by the patient to carry out the procedures. The patient is free to make decisions regarding choice of physicians and choice of treatments. Consent can be by proxy in the form of the patient delegating decision making or by means of a living will.

Valid consent must be voluntary, informed, and by a person with capacity to consent. It involves explaining the procedure contemplated, making sure the patient understands, and offering the patient a choice. Consent is limited to what was explained to the patient except in an emergency. Refusal to consent must be an informed refusal (patient understands what he is doing). Refusal to consent by a competent adult even if irrational is conclusive and treatment can only be given by permission of the court. Doubts about consent are resolved in favor of preserving life. Spouses and family members do not have an automatic right to consent. A spouse cannot overrule the patient's choice. Advance directives, proxy informed consent by the family are made for the unconscious terminal patient on withholding or withdrawal of treatment. Physician assisted suicide, active euthanasia, and voluntary euthanasia are illegal. A do not resuscitate order (DNR) by a physician could create legal complications. The living will has the following advantages: (a) reassuring the patient that terminal care will be carried out as he or she desires (b) providing guidance and legal protection and thus relieving the physicians of the burden of decision making and legal liabilities (c) relieving the family of the mental stress involved in making decisions about terminal care. The disadvantage of a living will is that it may not anticipate all developments of the future thus limiting the options available to the physicians and the family. The device of the power of attorney can be used instead of the living will or advance directive. Decision by a proxy can work in two ways: (a) decide what the patient would have decided if

able (b) decide in the best interests of the patient. Informed consent is still required for physicians in special practices such as a ship's doctor, prison doctor, doctors in armed forces. Police surgeons may have to carry out examinations on suspects without informed consent.

Consent Of The Incompetent

Competent children can consent to treatment but cannot refuse treatment. The consent of one parent is sufficient if the 2 disagree. Parental choice takes precedence over the child's choice. Courts can overrule parents. Life-saving treatment of minors is given even if parents refuse. Parental choice is final in therapeutic or non-therapeutic research on children. Mental patients cannot consent to treatment, research, or sterilization because of their intellectual incompetence. They are admitted, detained, and treated voluntarily or involuntarily for their own benefit, in emergencies, for purposes of assessment, if they are a danger to themselves, or on a court order. Suicidal patients tend to refuse treatment because they want to die. Nutrition, hydration, and treatment can be withdrawn in a persistent vegetative state since the chance of recovery is low. There is no moral difference between withholding and withdrawing futile treatment. Labor and delivery are emergencies that require immediate decisions but the woman may not be competent and proxies are used. Forced medical intervention and cesarian section may be ordered in the fetal interest. Birth plans can be treated as an advance directive.

Disclosure And Truthfulness

As part of the professional contract between the physician and the patient, the physician must tell the whole truth. Patients have the right to know the risks and benefits of medical procedure in order for them to make an autonomous informed consent. Deception violates fidelity. If disclosure will cause harm it is not obligatory. Partial disclosure and white or technical lies are permissible under necessity. Disclosure to the family and other professionals is allowed if it is necessary for treatment purposes. Physicians must use their judgment in disclosure of bad news to the patient.

Privacy And Confidentiality

Privacy and confidentiality are often confused. Privacy is the right to make decisions about personal or private matters and blocking access to private information. The patient voluntarily allows the physician access to private information in the trust that it will not be disclosed to others. This confidentiality must be maintained within the confines of the Law even after death of the patient. In routine hospital practice many persons have access to confidential information but all are enjoined to keep such information confidential. Confidentiality includes medical records of any form. The patient should not make unnecessary revelation of negative things about himself or herself. The physician can not disclose confidential information to a third party without the consent of the patient. Information can be released without the consent of the patient for purposes of medical care, for criminal investigations, and in the public interest. Release is not justified without patient consent for the following purposes: education, research, medical audit, employment of insurance.

Fidelity

The principle of fidelity requires that physicians be faithful to their patients. It includes: acting in faith, fulfilling agreements, maintaining relations, and fiduciary responsibilities (trust and confidence). It is not based on a written contract. Abandoning the patient at any stage of treatment without alternative arrangements is a violation of fidelity. The fidelity obligation may conflict with the obligation to protect third parties by disclosing contagious disease or dangerous behavior of the patient. The physician may find himself in a situation of divided loyalty between the interests of the patient and the interests of the institution. The conflict may be between two patients of the physician such as when maternal and fetal interests conflict. Physicians involved in clinical trials have conflicting dual roles of physicians and investigators.

Regulations About Professional Misconduct

Abuse Of Professional Privileges

Un-ethical research on patients is abuse of professional privileges. Abuse of treatment privileges consists of unnecessary treatment, iatrogenic infection, and allowing or abetting an unlicensed practitioner. Abuse of prescription privileges is manufacturing, possessing, and supplying a controlled drug without a license, prescription of controlled drugs not following procedures, diverting or giving away controlled substances, dispensing harmful drugs, sale of poisons, and writing prescriptions using secret formulas. Financial fraud may be pharmacy fraud (billing for medicine not supplied), billing fraud (billing for services not performed), equipment fraud (using equipment that is really not needed or using equipment of poorer quality), or supplies fraud. It is also illegal to get financial advantage from prescriptions to be filled by pharmacies owned by the physician. Kick-backs are unethical and illegal. False or inaccurate documentation is a breach of the law and includes issuing a false medical certificate of illness, false death certification, and false injury reports. Court action could be brought against a physician for the following crimes against the person: manslaughter (voluntary & involuntary); euthanasia (active and passive); battery for forced feeding or treatment; criminal liability for patient death; induced non-therapeutic abortion; iatrogenic death; abusive therapy involving torture; intimate therapy; rape and child molestation; and sexual advances to patients or sexual involvement. The physician-patient relation requires that the physician keeps all information about the patient confidential. Breach of confidentiality can be done only in the following situations: court order, statutory duty to report notifiable diseases, statutory duty to report drug use, abortions, births, deaths, accidents at work, disclosure to relatives in the interest of the patient, disclosure in the public interest, sharing information with other health professionals, disclosure for

purposes of teaching and research, disclosure for purposes of health management.

Private Mis-Conduct Derogatory To Reputation, *kharq al muru'at*

Breach of trust is a cause for censure because a physician must be a respected and trusted member of the community. Sexual misbehavior such as *zina* and *liwaat* are condemned. Fraudulent procurement of a medical license, sale of medical licenses, and covering an unqualified practitioner indicate bad character. Physicians can abuse their position by abuse of trust (eg harmful or inappropriate personal and sexual relations with patients and their families), abuse of confidence (eg disclosure of secrets), abuse of power/influence (eg undue influence on patients for personal gain), and conflict of interest (when the physician puts personal selfish interests before the interests of the patient). Other forms of misconduct are in-humane behavior such as participation in torture or cruel punishment, abuse of alcohol and drugs, behavior unbecoming, indecent behavior, violence, and conviction for a felony.

Public Professional Mis-Conduct

Physicians in private practice must adopt good business practices. *Halal* transactions are praised (Zaid H539). An honest businessman is held in high regard (Tirmidhi K12 B4). Leniency in transactions is encouraged (Bukhari K34 B16). Full disclosure is needed in any transaction (Ibn Majah K12 B45). Measures and scales must be fulfilled (Muwatta K31 H99). Bad business practices are condemned. There is no blessing in immoral earnings (Darimi K20 B60). Selling over another's sale is prohibited (Bukhari K34 B58). Cheating is condemned (Bukhari K34 B19). Also condemned are financial fraud including criminal breach of trust, *riba* on bills, fee splitting, bribery (Abudaud K23 B4). Sale of goodwill of a practice is allowed. Also allowed is agreement among partners that they will not set up a rival practice on leaving the partnership. Entering into a compact with pharmacists or laboratories involving fee splitting and unnecessary referrals is

not moral. Treatment regimens can not be patented as an intellectual property. Physicians are entitled to a reasonable fee as *ajr al tabiib* (Bukhari K37 B16). Medical fees cannot be fixed by government because the Prophet refused to fix prices (Abudaud K22 B49).

Etiquette With Patients and Families

Bed-Side Visits

The physician-patient interaction is both professional and social. The bedside visit fulfills the brotherhood obligation of visiting the sick. The human relation with the patient comes before the professional technical relation. It is reassurance, psychological and social support, show of fraternal love, and sharing. A psychologically satisfied patient is more likely to be cooperative in taking medication, eating, or drinking. The following are recommended during a visit: greeting the patient, *dua* for the patient, good encouraging words, asking about the patient's feelings, doing good/pleasing things for the patient, making the patient happy, and encouraging the patient to be patient, discouraging the patient from wishing for death, *nasiihat* for the patient, reminding the patient about *dhikr*. Caregivers should seek permission, *idhn*, before getting to the patient. They should not engage in secret conversations that do not involve the patient.

Etiquette Of The Patient

The patient should express gratitude to the caregivers even if there is no physical improvement. Patient complaints should be for drawing attention to problems that need attention and not criticizing caregivers. The patient should be patient because illness is *kaffaarat* and Allah rewards those who surrender and persevere. The patient should make *dua* for himself, caregivers, visitors, and others because the *dua* of the patient has a special position with Allah. When a patient sneezes he should praise Allah and the mouth to avoid spread of infections. It is obligatory for the attendants to respond to the sneezer. The

patient should try his best to eat and drink although the appetite may be low. The caregivers can not force the patient to eat. They should try their best to provide the favorite food of the patient. The believing patient should never lose hope from Allah. He should never wish for death. The patient should try his best to avoid anger directed at himself or others. Getting angry is a sign of losing patience.

Etiquette Of The Care-Giver

The caregiver should respect the rights of the patient regarding advance directives on treatment, privacy, access to information, informed consent, and protection from nosocomial infections. Caregivers must be clean and dress appropriately to look serious, organized and disciplined. They must be cheerful, lenient, merciful, and kind. They must enjoin the good, have good thoughts about the patients, *husn al dhann*, and avoid evil or obscene words. They must observe the rules of lowering the gaze, *ghadh al basar*, and *khalwat*. Caregivers must have an attitude of humbleness, *tawadhu'u*. They cannot be emotionally-detached in the mistaken impression that they are being professional. They must be loving and empathetic and show mercifulness but the emotional involvement must not go to the extreme of being so engrossed that rational professional judgment is impaired. They must make *dua* for the patients because *qadar* can only be changed by *dua*. They can make *ruqya* for the patients by reciting the two *mu'awadhatain* or any other verses of the Qur'an. They must seek permission, *isti' dhaan*, when approaching or examining patients. Medical care must be professional, competent, and considerate. Medical decisions should consider the balance of benefits and risks. The general position of the Law is to give priority to minimizing risk over maximizing benefit. Any procedures carried out must be explained very well to the patient in advance. The caregiver must never promise cure or improvement. Every action of the caregiver must be preceded by *basmalah*. Everything should be predicated with the formula *inshallah*, if Allah wishes. The caregivers must listen to the felt needs and problems of the

patients. They should ask about both medical and non-medical problems. Supportive care such as nursing care, cleanliness, physical comfort, nutrition, treatment of fever and pain are as important as the medical procedures themselves and are all what can be offered in terminal illness. Caregivers must reassure the patients not to give up hope. Measures should be taken to prevent nosocomial infections.

Etiquette Of Interaction Between Genders

Both the caregiver and patient must cover *awrat* as much as possible. However, the rules of covering are relaxed because of the necessity, *dharurat*, of medical examination and treatment. The benefit, *maslahat*, of medical care takes precedence over preventing the harm inherent in uncovering *awrat*. When it is necessary to uncover *awrat*, no more than what is absolutely necessary should be uncovered. To avoid any doubts, patients of the opposite gender should be examined and treated in the presence of others of the same gender. The caregivers should be sensitive to the psychological stress of patients, including children, when their *awrat* is uncovered. They should seek permission from the patient before they uncover their *awrat*. Caregivers who have never been patients may not realize the depth of the embarrassment of being naked in front of others. Medical co-education involves intense interaction between genders: Teacher-student, student-student, and teacher-teacher. Interacting with colleagues of the opposite gender raises special problems. Norms of dress, speaking, and general conduct; class-room etiquette; social interaction; laboratory experiments on fellow students; Clinical skills laboratory: learning clinical skills by examining other students; Operation theatre. Medical personnel of opposite genders should wear gender-specific garments during surgical operations because Islam frowns on any attempt to look like the opposite gender. *Shari'at* guidelines on interaction with patients of the opposite gender should be followed. Taking history, physical examination, diagnostic procedures, and operations should preferably be by a physician of the same gender. In conditions of necessity a physician of the opposite gender can be used and may have to look at the *'awrat* or touch a patient. The

conditions that are accepted as constituting *dharuurat* are: skills and availability. The preference between a Muslim of opposite gender vs non-Muslim of same gender depends on the local situation.

Dealing With The Family

Visits by the family fulfill the social obligation of joining the kindred and should be encouraged. The family are honored guests of the hospital with all the *shari'at* rights of a guest. The caregiver must provide psychological support to family because they are also victims of the illness because they are anxious and worried. They need reassurance about the condition of the patient within the limits allowed by the rules of confidentiality. The family can be involved in some aspects of supportive care so that they feel they are helping and are involved. They should however not be allowed to interrupt medical procedures. Caregivers must be careful not to be involved in family conflicts that arise from the stresses of illness.

Etiquette With The Dying

Comfort

Narcotics are given for severe pain. Drugs are used to allay anxiety and fears. The caregivers should maintain as much communication as possible with the dying. They should attend to needs and complaints and not give up in the supposition that the end was near. Attention should be paid to the patient's hygiene such as cutting nails, shaving hair, dressing in clean clothes. As much as possible the dying patient should be in a state of ritual purity, *wudhu*, all the time.

Ibadat

The dying patient should as far as is possible be helped to fulfill acts of worship especially the 5 canonical prayers. *Tayammum* can be performed if *wudhu* is impossible. Physical movements of *salat* should be restricted to what the patient's health condition will allow. The prophet gave guidelines on

salat even for the semi-conscious patient, *salat al mughma 'alayhi*. The terminal patient is exempted from saum because of the medical condition. It is wrong for a patient in terminal illness to start fasting on the grounds that he will die anyway whether he ate enough food or not. Illness does not interfere with the payment of zakat since it is a duty related to the wealth and not the person. The terminal patient is excused from the obligation of hajj. It is also wrong for a patient in terminal illness to go for hajj with the intention of dying and being buried in Hejaz.

Spiritual Preparation

Spiritual preparation involves allaying anxiety, presenting death as a positive event, thinking of Allah, and repentance. Caregivers should allay fear and anxiety about impending death. Death of the believer is an easy process that should not be faced with fear or apprehension. The process of death should be easier for the believer than the non-believer. The soul of the believer is removed gently. Believers will look at death pleasantly as an opportunity to go to Allah. Allah loves to receive those who love going to Him. The patient should be encouraged to look forward to death because death from some forms of disease confers martyrdom. The patient should be told that Allah looks forward to meeting those who want to meet Him (KS525). Dying with Allah's pleasure is the best of death and is a culmination of a life-time of good work. Thinking well of Allah is part of faith and is very necessary in the last moments when the pain and anxiety of the terminal illness may distract the patient's thoughts away from Allah. Having hope in Allah at the moment of death makes the process of dying more acceptable. The dying patient should be encouraged to repent because Allah accepts repentance until the last moment.

Legal Preparation

During the long period of hospitalization, the health care givers develop a close rapport with the patient. A relationship of mutual trust can develop. It is therefore not surprising that the patient turns to the care givers in confidential matters like drawing a will. The health care givers as witnesses to the will

must have some elementary knowledge of the law of wills and the conditions of a valid will, *shuru'at al wasiyyat*. One of these conditions is that the patient is mentally competent. The law accepts clear signs by nodding or using any other sign language as valid expressions of the patient's wishes. The law allows bequeathing a maximum of one third of the total estate to charitable trusts, *waqf*, or gifts. More than one third of the estate can be bequeathed with consent of the inheritors. Debts must be paid before death or before the division of the estate. A terminal patient can make living will regarding donation of his organs for transplantation. The caregiver must explain all what is involved so that an informed decision is made. The caregiver may be a witness. It is however preferable that in addition some members of the family witness the will to ensure that there will be no disputes later. The caregiver may be a witness to pronouncement of divorce by a terminally ill patient. The pronouncement has no legal effect if the patient is judged legally incompetent on account of his illness. If the patient is legally competent, the divorce will be effective but the divorcee will not lose her inheritance rights. The caregiver should advise the terminal patient to remember all his outstanding debts and to settle them. The prophet used to desist from offering the funeral prayer for anyone who died leaving behind debts and no assets to settle them. He however would offer the prayer if someone undertook to pay the debt. If the deceased has some property, the debts are settled before any distribution of the property among the inheritor.

Death, Burial, and Mourning

The last moments are very important. The patient should be instructed such that the last words pronounced are the kalimat, the testament of the faith. Once death has occurred the body is placed in such a way that it is facing the qiblat. Eyes are closed and the body is covered. Qur'an and dua are then recited. The health care giver should take the initiative to inform the relatives and friends. They should be advised about the shariah rules on mourning. Weeping and dropping tears are allowed. On receiving the news of death it suffices to say 'we are for Allah and to Him we will return'. The following are not

allowed: tearing garments, shaving the head, slapping the cheek, wailing, and crying aloud. Relatives are comforted by telling them hadiths of the prophet about death. These hadiths talk about the reward of the person who loses his beloved one and he is patient. The health care team should practice total care by being involved and concerned about the processes of mourning, preparation for burial and the actual burial. They should participate along with relatives as much as is possible. The preparation of the body for burial can be carried out in the hospital. The body must be washed and shrouded before burial. Perfume can be put in the water used for washing the body. The washing should start with the right. The organs normally washed in wudhu are washed first then the rest of the body is washed. Perfume can be used except for those who died while in a state of ihram. Women's hair has to be undone. After washing the body is shrouded, *kafn*, in 2 pieces of cloth preferably white in color. As many persons as possible should participate in salat al janazat. Burial should be hastened. Following the procession is enjoined. There is more reward for accompanying the funeral procession and staying until burial is completed. The funeral bier is carried by men. Hurrying in marching to the grave is recommended. The body should be buried in a deep grave facing Makka. After burial, the relatives are consoled and food is made for them. Women in mourning should not touch any perfume. Only good things should be said about the deceased.

Etiquette In The Health Care Team

Principles Of Group Work

A group is several interdependent and interacting persons. Work is enjoined in groups that are united, cooperative, open and trusting. Group members must be similar, empathetic, supportive, and sharing. Separation from group is condemned. Group norms must be respected. Breaking norms, secretive behavior, concealment of information, and secret talks destroy groups. Group membership has benefits of integration, stimulation, motivation, innovation, emotional support, and endurance. Group performance is superior to individual

performance. Group membership has the disadvantages of arrogance, suppression of individual initiative, member mismatch, and intra-group conflict. Group formation has 4 stages: forming (acquaintance and learning to accept one another), storming (emotions and tensions), initial integration (start of normal functioning), total integration (full functioning), and dissolution. Mature groups have group identity, optimized feedback, decision-making procedures, cohesion, flexibility of organization, resource utilization, communication, clear accepted goals, interdependence, participation, and acceptance of minority views. Groups fail when constituted on the wrong basis, when members cannot communicate, when there is no commonality (interests, attitudes, and goals), and when they have diseases of *hasad*, *nifaq*, *namiimah*, *gaybah*, *kadhb*, *riyah*, *kibriyah*, *hubb al riyasa*, *tajassus*, and *dhun al soo*. An effective group follows the Qur'an and sunnat, members feel secure and not suppressed, members understand and practice sincere group dynamics, members are competent and are committed to the group and the leadership.

Teaching & Learning in The Health Care Team

The hospital health care team is complex and multi-disciplinary with complementary and inter-dependent roles. Members have dual functions of teaching and delivering health care. Most teaching is passive learning of attitudes, skills, and facts by observation. Teachers must be humble. They must make the learning process easy and interesting. Their actions, attitudes, and words can be emulated. They should have appropriate emotional expression, encourage student questions, repeat to ensure understanding, and not hide knowledge. The student should respect the teacher for the knowledge they have. They should listen quietly and respectfully, teach one another, ask questions to clarify, and take notes for understanding and retention. They should stay around in the hospital and with their teachers all the time to maximize learning.

Care Delivery in The Health Care Team

Each member of the team carries personal responsibility with leaders carrying more responsibility. Leaders must be obeyed except in illegal acts, corruption, or oppression. Rafidah was good model of etiquette. She a kind, empathetic, a capable leader and organizer, clinically competent, and a trainer of others. Besides clinical activities, she was public health nurse and a social worker assisting all in need. The human touch is unfortunately being forgotten in modern medicine as the balance is increasingly tilted in favor of technology.

The Health Care Team: General Group Dynamics

Basic duties of brotherhood and best of manners must be observed. Encouraged are positive behaviors (mutual love, empathy, caring for one another; leniency, generosity, patience, modesty, a cheerful disposition, calling others by by their favorite names, recognizing the rights of the older members, and self control in anger. Discouraged are negative attributes (harshness in speech, rumor mongering, excessive praise, mutual jealousy, turning away from other for more than 3 days, and spying on the privacy of others).

The Health Care Team: Special Group Dynamics

Gender-specific identity should be maintained in dress, walking, and speaking. Free mixing of the genders is forbidden but professional contact within the limits of necessity is allowed. Patients of the opposite are examined in the presence of a chaperone. The gaze should be lowered. Modest and covering must be observed. Display of adornments that enhance natural beauty must be minimized.

Etiquette of Research on Animals

Enjoining Kindness To Animals

The prophet enjoined kindness to animals. Saving animals from danger is a noble act. There is reward for kindness to animals.

Prohibiting Cruelty To Animals

Cruelty and physical abuse of animals are prohibited. There is severe punishment is reserved for cruel treatment if animals. Face branding, beating, cursing, sexual abuse, sexual abuse, and wanton killing of animals were forbidden.

Animal Research: Purpose and Relevance

The purpose of animal research is to spare humans from risk. Findings in animals are relevant to humans because of similarities in physiology and biochemistry. However findings in animals cannot be directly transferred to humans; research on humans is still necessary for a definitive conclusion. Animal research is exploratory and not definitive.

The Law And Animal Experimentation

The position of the Law is that animal experiments are allowed if a *prima facie* case can be established that the result of the research is a necessity, *dharuurat*. *Dharuurat* under the Law is what is necessary for human life. The regulations of necessity require that no more than the absolute minimum necessary should be done, *al dharurat tuqaddar bi qadiriha*. Animal research has definite risks for the animals that are not balanced by any benefits: pain, suffering, permanent injury, inhumane treatment and operations, and being killed (sacrificed). Thus use of animals is justifiable on the basis of *taskhiir* and not any benefits that accrue to the animals. The risks to humans from animal research are minimal in the short term; long-term effects are difficult to fathom. The purposes and principles of the Law can be used to analyze all legal aspects of animal experimentation.

Outstanding Ethico-Legal Issues

There are limits to *taskhiir*. Humans were not given a *carte blanche* to exploit animals in any way they liked. They have to conform to the Law and moral guidelines. If the results of animal experimentation will lead to protection of human life, then research is allowed to proceed because then it is a necessity. This is similar to killing animals for food, a necessity for human life. If research is for general scientific

curiosity unrelated to any tangible human benefit, then it is beyond the authorization of *taskhiir*. There are differences among animals. Animals considered dangerous and must be killed. Use of such animals for research should therefore raise fewer ethical objections than other animals. All types of animals used in research cannot be subjected to unnecessary pain and suffering. Animals whose flesh is edible are preferably used in research. Use of animals that are haram like the pig should be avoided as much as possible and should be considered only in cases of dharurat. Animals, like humans, have rights to enjoyment of life and good health. The researcher must therefore follow Islamic etiquette to minimize animal suffering. The basmalah is said at the start of an animal experiment, similar to slaughter of animals for food, in recognition of the fact that the experiment is carried out with the permission of the creator under the requirements of *taskhiir*. The animals must be shown kindness and respect. They should not be subjected to the psychological pain of seeing other animals in pain or being sacrificed. Pain must be minimized both during the experiment and when the animal is being terminally sacrificed. This is based on the legal requirement of slaughtering animals using a sharp knife and as quickly as possible to prevent pain and suffering. The long-term effects of the experiment on the animal must be considered and efforts made to decrease suffering and pain. The nutritional and medical needs of the animal must be taken care of before, during, and after the research.

Etiquette Of Research On Humans

Historical Background

Early humans experimented with several plants and by trial and error found some to be useful as medicines and others to be poisonous. These early experiments were not planned in a systematic way neither were they documented. Galen founded experimental medicine before 200 CE. Historical experiments were carried out by James Lind In 1747 on scurvy, Dr Edward

Jenner in 1798 on small pox, and Goldberger in 1914 on pellagra. Community trials were carried out on vitamin C, the Salk and HBV vaccines, cardiac disease risk factors, and water fluoridation for dental caries. Clinical trials were on streptomycin in TB 1948, aspirin and vitamin C for cancer prevention, alpha-tocopherol and beta-carotene in lung cancer prevention in smokers. Unethical experiments without informed consent were carried out in the 1940s, 1950s, and 1960s. The Nuremberg code of 1946 laid down rules on voluntary informed consent, unnecessary experiments, animal before human experimentation, physical and mental suffering, scientific qualification of researchers, freedom of subjects to withdraw, and stopping the investigation if patient are in danger. The Helsinki Declaration of 1964 incorporated the Nuremberg code. Its basic principles were: conformity generally accepted scientific principles, qualified researchers, risk benefit assessment, research subject welfare, and full disclosure before informed consent. The Nuremberg and Helsinki codes on experimentation did not stop all unethical research. They lack were neither laws enforceable by the state nor moral standards enforced by conscience. They are an unsuccessful attempt at bridging the secular divide between morality and public life. Islam on the other hand looks at problems of human experimentation as purely legal issues. The Law provides adequate guidelines and safeguards. Islamic Law, unlike western law, incorporates morality in its fabric. There is therefore no need to have special ethical codes outside the Law.

Purposes Of The Law In Human Experimentation

The Islamic ethical theory on research is based on the 5 purposes of the Law, *maqasid al shari'at*, religion, life, progeny, the mind, and wealth. If any of the 5 necessities at risk permission is given to undertake human experiments that would otherwise be legally prohibited. Therapeutic research fulfills the purpose of protecting health and life. Infertility research fulfills the purpose of protecting progeny. Psychiatric research fulfills the purpose of protecting the mind. The search for cheaper treatments fulfills the purpose of protecting wealth.

Principles Of The Law In Human Experimentation

The 5 principles of the Law guide research. Research is judged by its underlying and not expressed intentions. Research is prohibited if certainty exists about beneficial existing treatment. Research is allowed if benefit outweighs the risk or if public interest outweighs individual interest. If the risk is equal to the benefit, prevention of a harm has priority over pursuit of a benefit of equal worth. The Law chooses the lesser of the two evils, injury due to disease or risk of experimentation. The principle of custom is used to define standards of good clinical practice as what the majority of reasonable physicians consider as reasonable. Under the doctrine of *istishaab*, an existing treatment is continued until there is evidence to the contrary. Under the doctrine of *istihsaan* a physician can ignore results of a new experiment because of some inclination in his mind. Under the doctrine of *istislaah* preventing a harm has priority over obtaining a benefit.

Informed Consent

Informed consent by a legally competent research subject is mandatory. Informed consent does not legalize risky non-therapeutic research with no potential benefit. It is illegal to force participation of the weak (prisoners, children, the ignorant, mentally incapacitated, and the poor) in clinical trials even if they sign informed consent forms.

Outstanding Ethico-Legal Issues

Research on fetal human tissues may encourage abortion. Cadaver dissection and post mortem examination are permitted under necessity. Use of human bodies in auto crash experiments violates human dignity. Genetic experiments may cause diseases hitherto unknown. The Law allows research on ageing as long as the aim is not prolongation of life or preventing death because those aspects are under Allah's control.

Formation of the Physician

Takwiin at Tabiib

Basic Islamic Education, *al tarbiyat al islamiyyat al asaasiyyat*

- Over-View
- Qur'an Study
- Hadith Study
- *Ma' thurat* Study
- Fiqh Study

Motivation, Education, & Development

- Motivation, *al tahfiz fi al Islam*
- Medical Education, *al ta' aliim al tibbi*
- Personal Development: intellectual, psychosocial, professional
- Skill Training

Over-View Of Basic Islamic Education

Introduction

The essence of personal development is purification of the soul. Professionals may be so engrossed in their work that they forget themselves until they find themselves in spiritual crises that in turn have adverse effects on their professional work. Knowledge is needed to know the correct aqidat and to perform ibaadaat. The Basic Islamic Education program consists of 4 main areas of study: Qur'an, Hadith, Ma' athuraat, and Fiqh. These are supplemented by *zawaid*, *nawafil*, *tafakkur*, and extra-mural activities. The program can be covered in the 5 years of the medical course. The program can be started at any age or level of medical education and can be continued after that. It can also be started at any time during professional life.

The Study Circle, *halaqat*

A halaqat or usra is a small self-study group that undertakes this program. Each halaqat should be led by a naqib. Members

of the halaqat should be of the same age groups and preferably same academic level. It is however possible to mix people of different ages and academic levels so that the young can learn from the older. The Naqib can lead discussion in some sessions and is also encouraged to delegate this responsibility to various members of the usra. Whoever has the responsibility for leading discussions must take 20-30 minutes preparing for the session. The Naqib must have a register in which members sign their name and the times of arrival. Signing-in should be done before the usrat starts any formal work. Members should start by reciting *surat al fatihat* and should adjourn with recitation of *tasbih kaffarat* and *surat al 'asr*. Meetings of the halaqat are preferably associated with acts of ibadat. The best times are therefore: before salat al fajr, after salat al fajr, before salat al jumu'at, after salat al asr, before salat al maghrib, and between salat al maghrib and salat al isha. The Naqib must make sure that all 4 components of the program are covered. The Naqibat should make sure that all members participate.

The Naqib should make sure that every member has a personal copy of the usrat manual. Each member should also bring along a copy of the Qur'an with translation in addition to whatever other books have been assigned. Special sessions should be set aside for collective self-evaluation by members of the usrah. The parameters of this evaluation should be agreed on by all. The evaluation could cover the usrah and its activities or could extend to other activities of the members. The purpose should be fostering the spirit of sharing experiences and self-criticism. Members should greet one another before starting. All members should endeavour to know one another by name. Any member wanting to go out for a valid reason must obtain the permission of the Naqibat. All members must learn to listen and not interrupt others. They must obey the instructions of the Naqibat. Members must avoid quarrels or loud arguments. A spirit of tolerance should exist

with the understanding that there could be more than one way of being right. Excessive laughing or joking should be avoided. Members should sit with proper adab. Recitation of the Qur'an should be done with *khushu* and *tadabbur*. Additional activities include discussion of current affairs and extra mural social activities.

Nawafil & Zawaid

Nafilat refers to acts of worship in addition to the obligatory ones. There is reward for undertaking them and no punishment for not carrying them out. Nafilat is purely for the benefit of the worshipper. Nawafil have an additional purpose of plugging gaps and deficiencies in the performance of the obligatory duties. The following are recommended salat nafilat, saum nafilat, sadaqat, and umra

Contemplation

Contemplation is meditation about Allah's creations and signs with deliberation. It is a spiritual and not an intellectual exercise. It requires concentration therefore it is often undertaken at times and places where environmental sensory distractions are minimal. Contemplation of the nature of Allah is forbidden. Contemplation is possible only on signs and creations of Allah. Contemplation can be carried out in the mosque or in other places isolated from the daily routines of life (open desert, forest, ocean etc). Salat is also a unique opportunity for contemplation. Dhikr is a form of contemplation. Contemplation can also be carried out during dhikr. There are several methods of achieving the purposes of contemplation. Contemplation can be by looking at nature. Contemplation can be by looking at the self. Contemplation can be on the wonders of Allah's creation. Contemplation can also be by thoughts. One can contemplate Allah's signs. One can contemplate the past. One can contemplate the future especially hell and paradise. Daily events of life in the individual and the community can be objects of contemplation. One can contemplate the Qur'an.

Qur'an Study

Thematic Approach

The Qur'an is a book of moral guidance. It therefore gives models and examples of the righteous, *salihin*, to be emulated as well as models of transgressor, *dhalimin*, to be avoided. It describes the thoughts, actions, and fate of the two groups in a historical perspective, a contemporary perspective, and a future perspective. It also provides intellectual arguments as well as makes pleas to humans to emulate the *salihin* and to avoid the *dhalimiin*. Some of the intellectual arguments used are related to Allah's signs. Verses on signs discuss Allah's signs for purposes of *itti'adh*. The signs may be in the past, the present, or the future. Signs in the past include stories of prophets and communities, accounts of the creation of the universe and of humans, conduct of righteous individuals and communities, the fate and humiliation of individuals and communities that were transgressors, and rebuttal of non-believers. Signs in the present include signs of Allah in the universe signs of Allah in humans, bounties of Allah for humans, social organization, and spiritual training, and rebuttal of the non-believers. Signs in the future include prediction of future events, an account of the events and horrors of the Last Day, punishment and reward.

The purpose of this study is to relate the verses to daily experience of the individual or the community deriving practical and moral lessons. The historical verses are especially relevant since history repeats itself. Human nature, character, and behavior are the same at all ages. The experience of past eras is therefore very relevant today. Humans are therefore enjoined to study history in order to learn from the past: Qur'anic verses are miraculously relevant to contemporary events of life. Verses condemning the Yahuud and Nasaara and polytheists also apply to any other persons in the present time who behave like those groups. The Qur'an also predicts future events on earth that people can see and verify for themselves. The verses of *ahkaam* also attempt to provide guidelines and limits within which those who want to be righteous can operate.

Methodology Of Tafsir

The verses selected are clear. They are understandable without the need for detailed explanation. The verses are selected and are studied by subject-matter. They are interpreted by precedent using the Qur'an and hadith. Cross-references to relevant verses and hadiths are provided in the foot notes. The main references are the *tafsir* works of Ibn Kathir and al Tabari. Our concern is translation and understanding of the meanings and not translation of words. A historical approach has been employed to derive lessons from past human experience. The scientific approach has been employed to draw lessons from Allah's signs in human biology and the physical universe. The following types of *tafsir* are not employed here: rational, philosophical, and juridical. Scientific miracles and abrogation are not addressed.

Instructions For Tafsir Sessions

Use a Qur'anic translation that has the Arabic script beside the translation. Take turns reading translation of the assigned verses for each topic. Make sure you understand the meanings of all words used in the translation. You can refer to the foot-notes for more detailed explanation of the context of revelation (sabab al nuzul), related verses and hadiths, and explanation of unfamiliar words. Discuss the assigned issue(s) using the given points as a guide. List lessons you have learned for your contemporary life as an individual and as a member of the community or society. Write down your conclusions.

Conceptual Tools

The following general conceptual tools are useful in the discussions: Qur'anic methodology, comprehensiveness of the Qur'anic vision, the Qur'an as a source of sciences, the Qur'an opens and challenges human intellect, Allah's fixed laws in humans and the physical world, the Qur'an as a solution to problems of humanity: social, economic, political, scientific, educational, and psychological.

Hadith Study

Objectives

The objective of the study of *hadith* is personal development, *tarbiyat al nafs*, which includes encouragement of good acts, *fadhail al a'amal*, remembrance of Allah, *dhikr al allah*, softening the hearts, *tarqiq al quluub*, encouraging hope for reward, *rajaa*, and fear of chastisement, *khawf*, correct social etiquette, *adab*, and improving manners, *tahdhiib al akhlaq*. This study is not concerned with critique of the text, *naqd al matr*, or chain of transmission, *naqd al sanad*, or any other academic aspect of *hadith* sciences, *ulum al hadith*.

Source Of Hadith

This module is a study of hadith of Imaam Nawawi's Garden of the Righteous, *Riyadh al Salihin*.

Methodology

Follow the etiquette, *adab*, of reading and studying *hadith*. Ablution, *wudhu*, is recommended but is not obligatory. Take turns in reading the assigned *hadiths* in Arabic aloud making sure you pronounce each letter correctly. Correct one another in a polite way. Read the translation of the *hadith*. Make sure you understand all the words in the translation. Do not start any discussion before fully understanding the text, *nass*. Refer to the foot notes for: the chain of transmission, related Qur'anic verses and *hadiths*. Discuss the *hadith* using the given points as a guide. List lessons you have learned for your contemporary life as an individual and as a member of the community or society. Write down your conclusions.

Conceptual Tools

The following general conceptual tools will be useful in your discussions: *sunnat* as a source of law, *hujjiyat al sunnat*, comprehensiveness of *sunnat*, *shumuul al sunnat*, *sunnat* as a basis for civilization, *hadharat*, and culture, *thaqafat*, the time and space dimension in the *sunnat*, *al bu'ud al zamani wa al makani*, *sunnat* and solution of social problems, *sunnat mu'alajat mushkilaat al umma*, *sunnat* as source of values,

qiyam, sunnat as dawa, sunnat understood in the context of the Qur'an, *fahm al sunnat fi dhaw'i al Qur'an*, understanding *sunnat* in the context of the related historical circumstances and purposes, *asbaab wa maqasid al sunnat*, focus on the spirit, *ruh*, and not letter, *lafdh*, of the *sunnat*, focus on the higher purposes, *maqasid*, and not the externalities, *dhawahir*, focus on the whole and not the parts, *juz'iyat*, appreciation that the purposes, *maqasid*, are constant but the methods, *wasail*, are variable, avoiding allegorical interpretations, *ta'awil majazi*, avoiding esoteric interpretations, *ta'awil batini*, belief in the unseen, *iman bi al ghaib*, without asking why and how, *'adam al su'al 'an al kayfiyat*, because human intellect is limited, *mahdudiyat al 'aql al insani*.

Ma'athuuraat Study

Dhikr

The Qur'an has emphasized the importance of *dhikr* in many verses. There is a lot of virtue in circles of *dhikr*. There is virtue in formulas of *dhikr* including *tasbih, tahmiid, tahlil*, and *takbiir*. *Dhikr* can be loud or silent. It can be in the heart or can be pronounced. *Dhikr* can be undertaken when in a state of wudhu. It can be undertaken when standing up or sitting down. It has to be in a clean place. No *dhikr* is allowed while in the toilet.

Ma'athuraat

Ma'athurat are formulas for remembering Allah (*dhik, allah*, that the Prophet (PBUH) used or recommended. Some are verses of the Qur'an whereas others are from hadith. Many are in the form of supplication, *dua*. One point needs to be clarified about the *ma'athurat*. They are not the only occasions for remembering Allah; they constitute a very small portion of *dhikr*. All human activity and endeavours are *'ibadat* as long as they are righteous and are part of *dhikr*. Obligatory acts of worship are also a form of *dhikr*. *Dhikr* has many benefits that include protection from evil, *munkar*; patience, *sabr*; calmness, *tama'aninat*; and success, *falah*. *Dhikr* has to be undertaken in

all conditions and at all times. Humans are enjoined to remember Allah a lot. Neglecting *dhikr* is severely condemned. *Dhikr* is a cause for reward, *thawab*. *Dhikr* accompanies worship, *ibadat*, and all human interactions, *mu'amalat*. *Dhikr* can also be in the heart, *dhikr al qalbi*. *Dhikr* can also be in the form of supplication, *dua*.

Objectives Of Studying Ma'athurat

This module has two inter-related objectives: (a) understanding and memorizing the *ma'athurat* (b) reciting the *ma'athurat* as *ibadat* which strengthens the attachment to Allah (c) Learning and using the *ma'athurat* will serve the additional purpose of using acceptable and established formulas of *dhikr* in the place of many innovations, *bid'a*, of doubtful authenticity that abound in the Muslim world.

Selection Of Hadiths

The hadiths were selected from Imaam Nawawi's book '*al adhkar al muntakhabat min kalaam sayyid al abraar*'. One *hadith* is assigned for each session. The choice was very selective. Only authentic *hadiths* were selected. Shorter hadiths were preferred over longer ones.

Instructions

Take turns in reading the assigned verse or *hadith* in Arabic. Correct one another in a polite way. Read the translation once and make sure you understand all the words. Refer to the footnotes for more detailed explanation. Then re-read with the purpose of memorization. Take the following measures to memorise. Repeat the reading at least 5 times. Write out the text in your own handwriting. Try to continue the recitation in your free time after the end of the session. Try to memorise as much as you can before the next session. Make sure you understand the occasion appropriate for the verse or *hadith* you have studied.

Fiqh Study

Study of the Book '*bulugh al maraam fi adillat al ahkaam*

Motivation, *al tahfiz*

Concept And Methods Of Motivation In Islam

Motivation can be intrinsic (self motivation), extrinsic (motivation by external rewards), or reactionary (temporary response to events). *Jannat* is a positive motivator. *Jahannam* is a negative motivator. Motivation starts with commitment to an intention *Ikhlāas al niyyat*. The reward for work is commensurate with the *niyyat*. Any work without *niyyat* is not recognized. The best of work is consistent and continuous. Performance may fall short of the *niyyat*. Work can be good work, '*amal hasan* or bad work, '*amal sayyi*. High job satisfaction is directly related to high motivation. Motivated workers know that work is *ibadat* and that Allah observes all they do so they strive for excellence, *ihsaan*. The salary meets the needs of the worker and family so that he can devote time and energy to the work and is not a just return for the work. Work is '*ibadat* and only Allah can recompense for it. Other sources of motivation are honor, *sharaf*, generosity, *karam*, and fulfillment, *wafaa*

Methods And Techniques Of Motivation

Motivated and motivated leaders clarify goals, set objectives, consult and respect followers, deal with followers kindly, humanely, and with fairness, have good 2-way communication, and make followers feel secure. A motivating work environment is challenging and meaningful. It has opportunities for advancement, learning and personal growth. It gives responsibility, independence, and job satisfaction. Positive reinforcement (appreciation, reward and praise) is a motivator. Negative motivation is due to worries, lack of self-confidence, low self-esteem, low self-worth, negative opinions in the work place, poor working conditions, poor leadership, inequity, and injustice. Negative reinforcement such as reprimand demotivates. People should work because they believe not because they receive. Intrinsic rewards are effective motivators than extrinsic motivators. Intrinsic rewards are task completion, achievement, autonomy, and personal growth. Extrinsic rewards are salary, benefits, and promotions.

Motivation In The Medical Profession

Students are idealistic on entry into medical school and talk about serving the community. On graduation many students think about material benefits and social status. A physician in a materialistic society is torn between contradictory forces of greed and service. Although service should have the higher priority, the material rights and privileges of the physician should not be forgotten because he also wants to live a happy and honorable life.

Motivation And Responsibility

A physician is a community leader who has to undertake *tarbiyyah*, *amr bi maroof*, and *nahy al munkar*. He is an advocate for the poor, the weak, and the deprived. He has to undertake research to push forward the frontiers of knowledge. He has to share his knowledge by teaching others. He has responsibility to the environment and posterity.

Early Muslim Physicians As A Motivator

Ancient Muslim physicians were encyclopedic in knowledge, all-rounded, motivated, hardworking, and productive. They excelled in medicine as committed Muslims because Islam is not incompatible with science. Their achievements are a motivator for today's medical students and physicians. Abubakr Al Razi (251-313H), wrote more than 100 books (the most famous being *al Hawi al Kabir*), investigated diseases (gynecological, obstetrical, hereditary, eye, small pox, and measles), discovered surgical sutures, used anesthetics, used ammonia to control diarrhea, considered psychological factors in disease treatment, and was director of hospitals in Baghdad and Rayy. Ibn Sina (370-428H) wrote many books (the most famous being *al Qanuun fi al Tibb*), recognized that TB was contagious, accurately described the symptoms of diabetes mellitus, discovered ancylostomiasis, and contributed to science, mathematics, chemistry, and philosophy. Al Zahrawi (d. 404H) had interest in surgery, pharmacology, and anatomy. He designed over 200 surgical instruments. His book *Kitaab al tasriif*, became a standard textbook of surgery. He was an expert in cancer surgery and tooth extraction. Ibn Zuhr (d. 487H), lived in Andalusia and Morocco and authored the book

al Taysir translated into Latin and used in Europe. Ibn Rushd (d. 595H) was a philosopher and a medical practitioner. His book *al Kulliyat* translated in Europe. He made the observation that smallpox infected only once. Ibn Al Nafees (d. 686H) described blood circulation before William Harvey and authored *Sharh tashriih al qanuun* in which he explained pulmonary circulation.

Medical Education, *ta'alim al tabiib*

Medical Education: Content And Issues

Medicine is closely associated with all the 5 purposes of the Law: *diin, nafs, nasl, aql, & maal*. Study of medicine is therefore *fardh kifayat*. Medical students should learn basic and clinical sciences, the essentials of Islam, *al ma'lum fi al diin bi dharurat, ahkam fiqhiyyat* relating to medicine, and the social background to disease causation and prevention. There are 6 conceptual issues in medical education from the Islamic perspective: purpose of medicine and medical education, integration, balance, service, leadership, and research.

The Issues Of Purpose, Integration, And Balance

The purpose of medicine is to restore, maintain or improve the quality of remaining life. It cannot prevent or postpone death because *ajal* is in the hands of Allah. The aim of medical education is producing physicians whose practice fulfills the 5 purposes of the Law within a holistic *tauahidi* context. They will have the following characteristics: health and not disease oriented, focused on quality and not quantity of life, humble to recognize limitations to their abilities, holistic in outlook, understand society, scientific capability, clinical expertise, and leadership. European secular-oriented medicine is fragmented by organ, disease process, and is not holistic. Islam can provide an integrative *tauahidi* paradigm to replace the European non-*tauahid* world-view that is atomistic, analytic, and not synthetic. In the absence of an integrating paradigm, European medicine lacks balance and equilibrium in its therapeutic approach. The Qur'anic concepts of *wasatiyyat, mizaan, i'itidaal, and tadafu'u* provide a conceptual framework for balanced medical practice.

The Issue Of Service

Medicine should be taught as a social service with the human dimension dominating the the biomedical dimension. Medicine should be practiced as of mutual social support. Medical education should prepare the future physician to provide service to the community. This will require skills of understanding and responding to community needs that can be acquired by spending part of the training period in a community setting away from the high technology hospital environment.

The Issue Of Leadership

The medical school curriculum and experience should be a lesson in social responsibility and leadership. The best physician should be a social activist who goes into society and gives leadership in solving underlying social causes of ill-health. The physician as a respected opinion leader with close contact with the patients must be a model for others in moral values, attitudes, *akhlaq*, and thoughts. He must give leadership in preventing or solving ethical issues arising out of modern biotechnology. He must understand the medical, legal, and ethical issue involved and explain them to the patients and their families so that they can form an informed decision. He should also provide leadership in advocating for the less privileged and advocacy for human rights.

Reform Of Medical Education

Admission decisions should in addition to academic competence consider comprehensive holistic approach based on *tauhid*, a service vocation, ethical and community leadership, and motivation to get knowledge. The medical school curriculum should be reformed in 2 ways: (a) more methodological content and less biomedical information (b) learning by apprenticeship by early involvement in patient care. The future physician must be a producer and not a consumer of knowledge. This will require giving more time to basic research methodological tools and decreasing the amount of biomedical scientific information that is either forgotten or becomes obsolete by the time of graduation. Student research projects are a good introduction to life-long curiosity in science

and discovery. Besides facts and skills, students learn values, attitudes, and assumptions from their teachers and the environment. For apprenticeship to succeed the teachers must be good models and the ambience must be Islamic. An ideal Muslim physician is a multi-dimensional character described as having *iman*, *taqwah*, *amanat*, and *akhlaq*.

Personal Development

Character Development

Character, determined by personality, is internal. Its outward manifestation is behavior, good or bad. Consistent observation of behavior over a long time reveals true character. The following are some of the components of a positive character: Piety, generosity, charity, chastity, trust, humility, balance, moderation, patience, endurance, cooperation, forgiving, ignoring stupid company, reconciliation, honor and dignity, shyness, modesty, integrity, courage, and wisdom. These traits are best manifested in an atmosphere of positive attitudes, optimism, and behavior. Positive behavior includes: controlling appetites (eating little, fasting, sexual self-control), fulfilling needs of others, mercy, good words and acts; and good deeds which wipe out bad ones.

Self-Improvement

Self-improvement requires commitment, effort and action to achieve goals, taking responsibility, learning from previous experiences (positive and negative), interdependence, pursuing real needs and not mere wants, a positive attitude, a futuristic outlook, assertiveness, self-confidence, and self reliance, and contentment.

Taking Charge

Being assertive is learning to take control. A person who has self-control can stand up to the temptations of *shaitan*. The following are ingredients of self control: self-confidence, self-esteem, self-reliance, self-discipline, and self-development. Self-confidence is to know yourself, your strengths and weaknesses, to be comfortable with what you are, and to be psychologically secure. Psychological security raises self-esteem. Self-help and self-improvement are in essence taking

charge of your life, relying on yourself in solving problems, and taking the initiative to improve. Self discipline is needed for success and consists of control of whims and emotions, sticking to goals, acting according to long-term and not short-term interests, avoiding impulsive acts, following the head and not the emotions, and trusting your instincts. An entrepreneurial attitude requires initiative, optimism, self-confidence, creativity, taking calculated risks, looking for and exploiting opportunities, perseverance and determination.

Social Development

Social development starts with selection of a spouse and starting a family. It involves learning to develop social networks and taking social responsibilities in the community.

Professional Development

The factors behind professional success are a good basic education, postgraduate training, apprenticeship to a good mentor, setting goals and a time frame to achieve them, adopting a growth strategy, delivering quality results in the work and not seeking cheap publicity. Professional networking involves identification of strategic partners for mutual benefit and not manipulating or exploitation. The networking starts within Muslim circles and extends to the wider professional and social circles. Nurturing contacts is very important otherwise they get lost. Economic empowerment should have the objective of eventual self-employment. A long-term development plan must be made. Putting side some of the monthly earnings for asset accumulation and investment ensures financial stability and expansion of the Muslim economic base.

Skill Training Program

Background

The performance gap potential and actual performance due deficiency of practical leadership and management skills can be covered by on the job training. Training is an investment in people, the most valuable organizational resource, and has a very high future pay-off in terms of better performance,

productivity, and growth. Rapid advances in technology make skills obsolete and necessitate continuous retraining to maintain effectiveness. Training is needed for all skills. The mission of STP is to close the performance gap. The philosophy of STP is training trainers, teaching practical skills, and repetitive continuous training to ensure continuing improvement in performance.

Training Approaches

STP teaches managements skills based on empirical experience. The skills are taught in an integrated way following the tauhidi paradigm. An interactive approach allows active participation of trainees in the training process. Training aids enhance the quality of training but cannot be a substitute for good planning and presentation of the training material. Reading material in the form of textbooks and selected articles is given to the participants. Exercises that test comprehension or that give the participant an opportunity to internalize the concepts taught are used. Case-studies from Muslim history and contemporary experience are used to discuss and internalize the leadership and management skills presented.

Methods Of Training

STP starts with training needs and training objectives. Design of STP covers the trainer, the trainees, the course material, lesson plans, methods of training, delivery of training (skills & techniques), questions, and discussions. Matching trainers to trainees ensures successful interaction. Trainers must understand the trainees. A prepared and written lesson plan must be followed but flexibility is required when the actual circumstances are different from the anticipation. The pace should be appropriate for the trainees. The following methods of training are: one-to-one, mentoring, lectures, discussion groups, panel discussion, debates, dialog, brain storming, demonstration, in-basket exercises, case studies, role playing, simulation, assignment of projects, entertainment/games, self-directed learning, personal development plan, interactive video, computer-based/programmed learning, and multimedia. Training opportunities/occasions are workshops, conferences, seminars, and camps. A presentation consists of 3 main parts:

introduction, body, and conclusion. Questions and discussions serve the purposes of clarification and feed-back. A-V aids help understanding and retention while maintaining trainee interest. The trainer should be speaking and interacting with the trainees for about 75% of the time. A-Vs are brought in at specific times to illustrate a point. It is a mistake to base the whole presentation on a set of A-Vs so that the trainer becomes a robot.

Planning And Execution Of Programs

Training needs must be assessed, prioritized, and ranked. The target group is determined. Participants are then using the criteria of leadership potential, teachability, teaching ability, and diffusion of ideas. The training plan document consists of trainee profiles, objectives of the training, contents of the training program, the training method, the trainers, the site of training, the budget, program execution, and program evaluation. A check is made on the physical facilities before implementation: space, lighting, access to board, access to PA equipment, and comfortable seating.

Evaluation Of Training Programs

The evaluation of short and long term impacts of STP must be planned at the same time as the training program. Both process and outcome evaluation (behavioral change and impact on work performance) are carried out. The purposes of evaluation are identifying weaknesses for better future planning, reassuring and motivating workers, reassuring supporters and stake-holders, assessing the impact of training on organizational performance, and assessing the impact of training on individual performance. Evaluation is undertaken by the trainer, the trainees, or outside experts. The following are evaluated: training session, speaker, trainees, program, and training material. The evaluation criteria must be realistic, relevant, and quantifiable. The evaluation can be immediate, intermediate or long-term. Data for evaluation can be collected by questionnaire, observation, interviews, surveys, etc. The evaluation reports should consist of the following sections: background, research questions, methodology, findings, conclusions / recommendations, and attachments

Physical Acts of Worship

Fiqh al Ibadat

Taharat & Salat

- Taharat
- Rulings Of Salat, ahkaam al salat
- Physical Acts Of Salat
- Special Types Of Salat
- Salat In Difficult Circumstances, salaah ahl al a'adhaar

Physical 'Ibadat

- *Saum*
- Zakat
- Hajj
- Tilaawat Al Qur'an

Taharat

Wudhu

Wudhu has physical, psychological, and social or emotional benefits. It is washing or wiping with a wet hand the exposed parts of the body (face, hands, forearm, head, and feet) once, twice, or thrice. It suffices to wipe the turban, the top of socks, or the bandage. Additional non-obligatory acts are running water down the elbow, *istinshaar*, *madhmadhat*, wiping the inter-digital spaces of hands and feet. *Wudhu* is nullified by passing urine, feces, or flatus; ejaculation; urethral discharge; prostatic discharge; menstruation; deep sleep; vomiting; eating camel meat; touching the external genitals. *Wudhu* is not nullified by medical treatment involving bleeding; touching a woman with no sexual desire or intentions; bleeding from a fresh wound; inter-menstrual bleeding; and kissing. A person who has no *wudhu* cannot touch or read the Qur'an.

Washing Of The Body, *Ghusl*

Bath, *ghusl*, is obligatory after coitus, male and female sexual emissions without coitus; end of menstruation; and end of post-natal bleeding; after washing a dead body; conversion to Islam; and on assuming *ihraam*.

Oral Hygiene

Use of the tooth-pick is encouraged. It is recommended before *salat* but the prophet did not want to make it compulsory for fear of burdening the *ummat*. *Siwaak* is *mustahabb* at all times even during *saum* after midday. *Siwaak* is recommended before going to bed. Rinsing of the mouth is recommended after food.

Dry Ablution, *Tayammum*

In the absence of water, *tayammum* is carried out for both *wudhu* and *ghusl* (for both travelers and non-travelers), in extreme cold, some disease conditions and wounds that would be aggravated by use of water. *Tayammum* is wiping the face, hands, and forearms after lightly touching soil with dry hands.

Clothing, *Thawb*

Salat will not be valid if there is any impurity in the clothes. Perfume can be worn. Nakedness in *salat* is offensive even if one is praying alone in a closed room. It is permitted to pray while wearing sandals. Wearing of shoes in *salat* is allowed if not praying in a *masjid*.

Rulings Of *Salat*, *ahkaam al salaah***Obligation And Exemptions Of *Salat***

Children are told to pray at the age of 7 years and are punished for not praying at the age of 10. Adults (post-puberty or age 15 and above) who are sane are obliged to pray. Women in menstruation or post-natal bleeding are exempted from *salat* and do not have to make up the missed ones. They can however attend the 2 *salats* of '*eid*' but do not have to carry out the physical acts of prayer.

Regulations & Etiquette Of Salat, *Ahkam Al Salaat & Adab Al Salat*

The following are conditions for validity of *salat*, *shuruut al salat*: (a) purification of the body from excrement of stool and urine (b) purity of the garment (c) purity of the place (d) covering nakedness (e) facing the direction of the *ka'aba*, (f) ascertaining the entry of *salat* time (g) knowing the obligation of *salat* and (h) and knowing the method of *salat*. Among the offensives, *makruhat al salat*, are *salat* with hunger, thirst, or urinary and fecal urgency. Omitting one of the following *sunnats* of *salat* is left out requires *sujuud al sahaw*: (a) the first *tashahhud* (b) sitting in the first *tashahhud* (c) asking blessings for the prophet in the first *tashahhud* (d) asking for blessings on the relatives of the Prophet in the first *tashahhud* (e) *reciting al qunuut* (f) standing up in *qunuut*. The following are invalidators of *salat*, *mubtilaat al salat* (a) extraneous speech, (b) extraneous movements, and (c) eating (d) speech.

Adhaan & Iqaamat

Adhan and *iqamat* are obligatory for *salat al jama'at* but *sunnat* for individual *salat*. They are required for a second congregation held in the same place for latecomers. They are not *adhan* is required *salat al jama'at* of women. The muaddhin must have wudhu, face the qiblat, and raise the voice. *Adhan* is only at the start of *salat* time interval except for *salat al fajr* when it can be before the time to wake people from sleep. A prescribed response to *adhan* is required even during *haidh* and *janaba* but is delayed in copulation and or when in the toilet. A prescribed *dua* is recited at the end of the *adhan*. *Salat al nafilat* is allowed between *adhan* and *iqamat* but not after *iqamat*. Emergencies can be attended to after *iqamat*. After *adhan* worshippers should come to *salat* with calmness without rushing. The latecomer makes up what was missed. When camping out in the open or if a hospital public address system is used, people can pray where they are on hearing *adhan* and *iqamat*.

Place And Times Of Salat, *waqtu al salat & makaan al salat:*

Facing the *qiblat* (general direction of the *ka'aba*) is required for salat al fardh but not salat al nafilat offered on a moving vehicle. Salat can be offered inside or outside masjids. Masjids should be simple (in building and furnishing) and clean. Salat al nafilat is best offered at home. A barrier is used for salat in an open space. Salat in the hospital can be on the bed of facing a bed. Salat is not permitted in the cemetery, the bath-house, middle of the road, rubbish dump, the church, or a slaughterhouse. Sujud is allowed on wood or on a mat. The times of obligatory *salat* are a fixed interval. The best of *salat* is at the start of the interval. On a journey 2 *salats* can be combined by *jam 'u taqdiim* or *jam'uu taakhiir*. *Salat al dhuhr* can be delayed in extreme heat and *salat al isha* can be delayed to late night. *Salat* is prohibited between *salat al fajr* and sunrise, just before sunset, and at midday until the sun crosses the meridian. These prohibitions do not apply for *salat al qadhat*, *salat nafilat* for a specific purpose, *sunnat al tahajjud*, *sunnat al wudhu*, and for *salat al janazat*. There is no time restriction on *salat* in the *haram* of Makka. *Salat* is delayed in extreme hunger and extreme thirst in presence of food or drink, and extreme heat or extreme cold. A forgotten *salat* is offered as soon as it is remembered. *Adhan* and *salat al jamaat* are allowed in make-up prayers but *sujuud al sahaw* is not required.

Regulations Of Congregational Prayer, *ahkaam salat al jama'at*

Salat al jama'at is communally obligatory, *fardh kifayat*, for resident males in order to establish the practice of *salat* in public but is *sunnat* for women and travelers. The criteria of the *imaam* (in order) are: knowledge, memorization of the Qur'an, older age, moral reputation, cleanliness, and a good voice. The host, the masjid *imaam*, and the sultan have priority as *imams*. A woman can be *imaam* of other women. Once selected, the *imaam* must be followed closely. The *imaam* must consider the weak in the congregation. If the *imaam* prolongs the *salat*, the follower with a need is allowed to leave. The

imaam can be reminded by a follower reciting the correct passage. An imam who forgets an action is reminded by men saying '*subhana al laah*' and women by clapping hands. Followers cease following an imaam who omits a pillar of salat. They perform a sunnat omitted by the imaam on their own and continue following him. It is permissible for the imaam to offer a different salat from that of the followers. The followers cannot offer salat al qasr if the imaam is offering a full salat.

Physical Acts Of Salat

Pillars, Obligations, And Conditions Of Salat

The physical acts of *salat* must be performed properly because disorderly *salat* is not conducive to spirituality. There 17 pillars of salat are: 1. *niyyat*, 2. *takbirat al ihraam* 3. *qiyaam* (standing up) 4. *qira at* (recitation of *surat al fatihat*) 5. *ruku* (bowing) 6. *tama'aninat* (being temporarily stationary after bowing). 7. *'itidaal* (standing straight after bowing). 19. *Tamaininat* (being temporarily stationary after bowing). 9. *sujuud* (prostration) 10. *tama'aninat* (being stationary in prostration) 11. *julus bayna al sajdatayn* (sitting between the two prostrations). 12. *tama'aninat* (being stationary in the sitting position). 13. the last *tashahhud*. 14. sitting during the last *tashahhud*. 15. Prayer for the prophet, *salat ala al nabi*. 16. The first salaam, *al tasliim al awaal* 17. Carrying out the above acts in order, *tartiib*.

The Start

The following is the sequence of the pillars: *niyyat*, is implicit. Its pronouncement is *sunnat* and not a condition for validity of *salat*. *Salat* starts with *takbirat al ihraam*. The hands are raised to the level of shoulders when reciting *takbirat al ihraam*. The right hand is put over the left hand. The position of the hands on the chest or abdominal walls is variable. *Takbir* is repeated every time there is a change of position. The next physical acts are bowing, *ruku'u*, rising from bowing, prostration, *sujuud*, and rising from *sujuud*. In standing, *qiyaam*, men stand on both feet with their legs separated while women stand with their

legs together. The worshipper looks at the *imaam*. It is prohibited to look at the sky or to allow distraction of the eyes. Supplication to start the *salat*, *dua iftitaah al salat* takes various forms some long and some short.

Recitation

Recitation of *surat al fatihat* follows *dua iftitaah al salat*. No *salat* is valid without this recitation. The recitation may or may not include *basmalah* at the start of *surat al fatihat* and *ta'amiin* at the end. *Surat al fatihat* is followed by one other *surat* in the first 2 *raka'ats* and is recited without an additional *surat* in the third and fourth *raka'ats*. Recitation is loud in *salat al maghrib*, *salat al fajr*, *salat al isha*, *salat al jumu'at*, *salat al tarawiih*, *salat al kusuuf*, *salat al istisqaau*, and *salat al eid*. Recitation is loud for missed day prayers offered at night and is soft for missed night prayers offered during the day. The follower must recite *surat al fatiha* for himself and not rely only on the recitation of the *imaam*. Both the *imaam* and the follower repeat the formula '*amiin*' at the end of the recitation of *surat al fatihat*.

Bowing And Prostration

Bowing is at the waist. Hands are put on the knees and the fingers are spread out or are joined closely together. The formula '*subhana rabbiy al 'adhiim*' is repeated 3, 5, 7, or 9 times. Then the back is straightened and the trunk is erect with the head is raised to the position before the start of rukuu while repeating '*sami'a al llaahu li man hamidahu rabbana laka al hamdu mil'a al samawaati wa mi'a al ardh wa mil'a ma shi'ita min shay'I ba'adahu*'. The *qunuut* supplication is repeated in *salat al fajr* after rising from bowing in the second rak'at. Prostration, *sujuud*, is on the forehead, the two hands, the knees, and the 2 feet. The ground bears the weight of the head. The rear of the trunk is higher than the front. The forehead touches the ground but the nose need not touch the ground. The palm is put firmly on the ground while the elbow is raised. Sitting down between two prostrations is required. The formula '*subhana rabbi al a'ala*' is repeated 3 times during *sujuud*. Men separate the knee and feet but the women keep them together.

Separating arms from the trunk is recommended for men but is discouraged for women. The prostration of recitation, *sujuud al tilawat*, does not require facing the *qiblat*. It starts with *takbir* and ends with *taslim* unless it is in *salat* in which case the *taslim* is not necessary.

Tashahhud, Tasliim, Dhikr And Dua

The *tashahud* at the end of the first 2 *rak'ats* is brief and is not obligatory; the one at the end of the *salat* is longer and is the one that is obligatory. There is a supplication, *dua*, after the last *tashahhud*. Recitation of *tashahhud*, has several variants. The index finger is used to point or it can be moved. There is a supplication, *dua al tashahhud*, and a prayer for the prophet, *salaal ala al nabi*. Prostration for forgetting, *sujuud al sahaw*, is 2 prostrations for each act of forgetting just before *tasliim*. The *salat* is formally closed after the first *tasliim*. The second *tasliim* is *sunnat*. *Dua* before *taslim* is recommended. The following can be done after the formal closure of the *salat*: supplication, *dua*, remembrance of Allah, *dhikr*, and recitation of *ayat al kursi*. *Dhikr* after *taslim* is recommended but is not obligatory. The *dhikr* is silent unless the imaam wants to teach people in which case he will repeat the *dhikr* aloud.

Obligatory And Non Obligatory Salat

The 5 Obligatory Salats

Al salawaat al khams, the five daily prayers, are obligatory for all Muslims. *Salat al fajr* is 2 *raka'at* offered at dawn. *Salat al dhuhr* is 4 *raka'at* offered at mid-day. *Salat al asr* is 4 *raka'at* offered at mid-afternoon. *Salat al magrib* is 3 *raka'at* offered at sunset. *Salat al isha* is 4 *raka'ats* offered at night.

The Friday Salat, *salat al jumu'at*

Salat al jumu'at is personally obligatory for all Muslims with the exceptions of servants, women, children, the sick, and the traveler. Bathing, siwaak, perfume, oiling hair, and good clothes are recommended on Friday. Early arrival, tranquility, and *dhikr* on the way are recommended. Two adhans are made. The first one is a warning and the second is before the *khutbat*. Attentive listening to the *khutbat* is part of *salat al jumu'at*.

Speaking during the *khutbat* is forbidden even if it is admonishing another person to be quiet. The *imaam* stands up and delivers 2 short *khutbats* in a loud voice with a brief pause between. The *khutbah* can be in any other language. *Salat al jumaat* is 2 *raka'ats* prayed after the *khutbat* with loud recitation of the Qur'an. A late-comer who prays only one *raka'at* with the *imaam* can make up the missed *raka'at*. A late-comer should not displace anybody who is already seated.

Non Obligatory Salat

Salat al layl / salat al tahajjud / salat al qiyaam has no limit to the number of *raka'ats* that can be prayed at night but each two must be concluded with *tashahhud* and *taslim*. *Salat al tarawiih* is 20 *raka'ats* on each night preceding a day of Ramadhan. *Salat al witr* is the last prayer of the night offered at any time between *salat al isha* and *salat al fajr*. Its *raka'ats* are odd with a minimum of 1 and a maximum of 11. *Salat al dhuha* offered at mid-morning is 2, 8, or 12 *raka'ats*. *Salat al tatawu'u* is before, *qabliyat*, or after, *ba'adiyat*, the 5 prescribed prayers. Its *raka'ats* are 2 before *salat al fajr*, 2 before *salat al dhuhr*, 4 after *salat al dhuhr*, 4 before *salat al asr*, 2 after *salat al maghrib*, and 2 after *salat al isha*. *Salat al eid* is a community gathering and a *sunnat mu akkadat*. Food is taken before *salat eid al fitr* but not before *salat eid al adh'ha*. It is *sunnat* to return from *salat* by a different route and to walk on foot. Bathing, best clothes, and going for *salat* are recommended. *Salat al eid* is best held in an open space but can be held in the *masjid* if it rains. It consists of 2 *raka'at* followed by 2 *khutbats*. The *imaam* arrives just before start of *salat*. *Takbirs* are pronounced 9 before the first *khutbah* and 7 before the second. *Adhan* and *iqamat* are not required. The call to prayer is '*al salat jami'at*' repeated twice. There are 7 *takbirs* in the first *rakaat* and 5 in the second. No *salat nafilat* is allowed before or after *salat al eid* at the place of the congregation. It is recommended to repeat *takbir* on all days of '*eid*.'

Salat For Special Needs

Salat al istisqaa it is 2 *rak'ats* followed by 2 *khutbahs* offered during drought to ask Allah for rain. *Salat al kusuf* is offered during a solar eclipse. It has no *adhan* or *iqamat*. It is 2 *rak'ats* but each *rak'at* has 2 *fatiha* recitations and 2 *ruku'us* with 2 *khutbahs* at the end of *salat*. *Salat al khussuf* is offered during a lunar eclipse. *Salat al khawf* is offered during a legally-sanctioned military engagement. Some fighters offer *salat*, others guard them, and others engage the enemy. If the danger is extreme *salat* can be performed while riding or standing. One *raka'at* is sufficient when in danger. If the fighting is very intense, *salat* can be by nodding instead of *ruku'u* or *sujud*. *Salat al istikharat*, is offered when there is a matter that requires decision and the right solution is not known. After praying 2 *rak'ats* a special *dua* is said recited asking for guidance in decision making.

Salat For Special Times And Special Times

Sunnat tahiyyat al masjid is offered as 2 *raka'at* on entering an ordinary *masjid* but *tawaaf* is preferred for *masjid al haraam*. *Salat al safar* is 2 *rak'ats* offered on starting a journey and 2 *rak'at* on return. *Salat sunnat al I'tikaaf* is 2 *rak'ats*. *Salat sunnat al wudhu* is 2 *rak'ats* at end of *wudhu*. *Salat al janazat* for the dead is *fardh kifayat* fulfilled by 1 male or some females. The corpse is placed on its right side with the face towards *qiblat*. The *imaam* stands at the head of the male corpse and at the lower end of the female corpse. One *salat al janazat* can be offered for several corpses simultaneously. *Salat al janazat* consists of 4 *takbirs* without any *ruku'u* or *sujud*. *Surat al fatiha* is recited at the first *takbir*. *Salat 'ala al nabi* is recited at the second *takbir*. *Dua* is recited for the deceased at the third *takbir*. The following formula is recited at the fourth *takbir* '*allahuma la tahrimuna ajrahu wa la taftinna ba'adah*'. This is followed by *tasliim*. *Salat al janazat* is held for all the dead except those who died of suicide. It is held just before burial. *Salat al ghaib* is offered for a deceased buried elsewhere. It cannot be held in the cemetery.

Salat In Difficult Circumstances

Difficult Conditions

The following are considered difficult physical circumstances: extreme heat, extreme cold, rain & flooding, earthquake, and a long journey. The following are considered difficult psychological conditions: fear, *khawf*, urgent need for relief of stool or urine, hunger when food is presented, overwhelming sleep, forgetting, and mind wandering.

19.5.2 Salat In Extreme Weather Conditions

Salat can be delayed for weather conditions that can change for example delaying *salat al dhuhr* on a hot day.

Salat During War

Soldiers on the battle field can pray abridged prayers and physical movements are changed. The *salat* of fear, *salat al khawf* is prayer during a legally-sanctioned military engagement. The *salat* of fear, *salat al khawf* is prayer during a legally-sanctioned military engagement. Some fighters pray, others guard them, and others engage the enemy. Some fighters pray, others guard them, and others engage the enemy. If the danger is extreme prayer can be performed while riding or standing. One rakaat is sufficient when in danger. If the danger is extreme prayer can be performed while riding or standing. One rakaat is sufficient when in danger. If the fighting is very intense, prayer can be by nodding instead of bowing and prostration. If the fighting is very intense, prayer can be by nodding instead of bowing and prostration.

Salat Of The Traveler

The traveler can shorten the prayer, *qasr al salat*. This applies to the 4-rakaat prayers: *salat al dhuhr*, *salat al asr*, and *salat al isha*. *Salat al maghrib* and *salat al fajr* are prayed in full. *Qasr* is carried out during the journey and only for 3 days after arriving at the final destination. On arrival at the destination with the intention of traveling again, *qasar* can be continued for 18 days and no more. Joining, *jam'u*, can be done in case of

rain preventing return for another *salat*, for a nursing woman, for a woman with a chronic vaginal discharge who is not sure she will be in a clean state for the next *salat*, fear of urinal contamination for those with urinary incontinence, fear for life, fear for property, and fear for honor. In the cases mentioned above, the joining of *salat* can be only apparent and not real, *jam'u suuri*. The first *salat* is offered at the end of its time while the next one is offered at the start of its period. The traveler is permitted to join 2 adjacent prayers, *jamu al salat fi al safar*. *Dhuhr* and *asr* can be offered together at the time of *dhuhr*, *jam'u taqdiim*, or at the time of *asr*, *jam'u ta'akhir*. *Maghrib* and *isha* can be offered at the time of *maghrib* or the time of *isha*. There is merit in shortening the prayer by the traveler. It is offensive for the traveler to refuse making use of the exemptions given. The shortest journey for which *salat* is shortened is 81 km or 48 miles. What matters is the distance and not the time required to cover that distance. If there is no way at all for holding *salat*, it can be made up at a suitable time later.

Salat Of The Sick, *salat al maridh*

The patient may have the following physical handicaps: inability to face the *qiblat*, inability to stand, inability to sit, inability to read, inability to bow, and inability to prostrate. The following are solution alternatives: make-up *salat*, *qadha al salat*; resting for moments in a sitting position to regain energy for the next movement; praying in a sitting position; praying while sitting down and cross-legged; praying while lying down on one side of the body; resting on a staff in *salat*; Praying by gesturing with one part of the body e.g. finger; and finally praying in the mind with no motions. The sick stop *qiyam al layl* and try to fulfill the 5 prescribed prayers. *Salat* can be interrupted for an urgent need that could be medical or otherwise. Soldiers on the battle field can pray abridged prayers and physical movements are changed. Women are excused from *salat* during the period of menstruation because of the associated physiological stress.

Saum

Obligation, *Taklif*

Fasting is obligatory for adult, sane, and healthy Muslims. Fasting of children is for training but is not obligatory. The sick are allowed to make up for lost days later. Excuse from fasting may be or may not be accompanied by *kaffaarat*. The wife must get her husband's permission for non-obligatory fasting. Such permission is not needed for the fasting of Ramadhan. If a person deliberately breaks the Ramadhan fast with no valid excuse he must fast two consecutive months for each day. Excessive hunger or thirst that are feared to harm health are valid excuses to break the fast and make up later. If a person eats or drinks in forgetfulness then all they have to do is to complete the day and the day is considered valid. A non-obligatory fast can be broken at any time but must be redone. A guest does not fast non-obligatory fasts except with the permission of the host

Types Of Fasting

Ramadhan is obligatory as explained above. The following are permitted non-obligatory fasting: Mondays and Thursdays, the 9th and 10th of Muharram, 6 days in the month of shawal, 3 days in every lunar month, the day of Arafat for the pilgrim, 9th of Dhil al Hajj, the sanctified months. The following types of fasting are forbidden: fasting of the 2 days of *eid al fitr* and *eid al adh-ha*, singling out Friday as a day of fasting, fasting in the second half of the month of sha'abaa, continuous fasting, fasting a doubtful day, and purposely planning to fast on Friday, Saturday, or Sunday.

Regulations & Etiquette, *Ahkam & Adab Al Saum*

Start and end of Ramadhan is by sight of the crescent or by computation. Saum has 3 main pillars: intention and abstinence from food and drink. Its etiquettes are niyyat before *fajr*, delaying *suhuur*, hastening *iftaar*, *iftaar* on dates and water, avoiding overeating at *iftaar* and *suhuur*. Its permitted day acts are: using the *miswak*, bathing in water, applying kuhl, kissing a spouse, injection of medication, venupuncture, and washing

the mouth and nostrils. Its recommended acts are *salaat al tarawiih*, *i'itikaaf*, *dua* at *iftaar*, charity, providing *iftaar* for others, joining kindred relations, recitation of the Qur'an, ghusl before *salat al fajr*, and avoiding back-biting, lying, and obscenities. Its prohibitions of saum are eating, drinking, and sexual intercourse. It is nullified by deliberate eating or drinking, use of snuff or tobacco, instilling water until it reaches the ear-drum, excessive *madhmadhat*, excessive *istinshaaq*, insanity or loss of consciousness even if temporary, and penetration by any object into the body orifices (alimentary canal, the rectum, or the vagina), deliberate vaginal intercourse or any other sexual act that leads to orgasm, menstruation, post-natal bleeding, and masturbation. It is not nullified by a wet sexual dream, cooling by tepid sponging, use of *siwaak*, use of toothpaste and toothbrush, and rinsing the mouth. The traveler can choose between saum and iftar but iftaar is preferred. Spontaneous vomiting does not require atonement but induced vomiting does. Use of hormones to delay menstruation and avoid breaking saum is not recommended.

Fasting In Difficult Circumstances

The elderly and patients with chronic or terminal illness are permanently excused from saum. They can choose to feed the poor instead or their heirs can make up their missed saum (*qadha*) if they die. Travelers, patients with curable illnesses, pregnant or breastfeeding women, women in haidh or nifaas are temporarily excused from saum but they have to make up (*qadha al saum*) before the next Ramadhan. Kaffaarat by feeding the poor is due if the next Ramadhan comes before the qadha. Saum in haidh or nifaas is invalid. More drinks are taken in hot weather to prevent dehydration and more food is eaten in cold environments to generate heat. Polar regions with long days or long nights follow the suhuur and iftar times of the nearest temperate region.

Medical Rulings About Fasting

Hypoglycemia and dehydration are prevented by prohibition of continuous saum and encouragement of early iftaar and late suhuur. Saum is exempted in physiological stress (haidh, nifaas, old age, illness, pregnancy, and breastfeeding). The

following should be avoided: over-eating at *iftaar* and *suhuur*, and exposure to high temperatures. The following are encouraged: high fiber diets, adequate fluid and mineral intake, and cooling the body. Diabetics should consult trusted physicians before saum. The following do not nullify saum: drugs applied externally on the skin, eye drops, nose drops (if not swallowed), injections (sub-cutaneous, intra-muscular, and intra-venous), and sub lingual tablets. Elective medical procedure should be delayed until after saum. The following nullify saum: inhalants, nourishing i.v. injections, drugs taken orally or rectally. Saum teaches control of the food appetite and prevents diseases of overnutrition. It prevents sexually-related diseases by teaching control of the sex appetite.

Zakat

Obligation

Zakat al maal is obligatory when a person has held a minimum taxable amount, *nisaab*, for 1 year, *hawl*. The obligation is related to the property and not the person. Males or females, adults or children are all obliged to pay zakat. Zakat is not obligatory for non-Muslims. Debts do not remove the obligation of zakat. Zakat can be paid in advance. Zakat al fitr is obligatory and must be paid before salat eid al fitr. It is levied only on Muslims. It is a fixed amount paid on behalf of each member of the family at the end of the fasting month of Ramadhan. It plays a very important social and psychological function. The less privileged are assured that they can take part in the festivities at the end of the fasting month. Voluntary alms, *sadaqat al tatawu'u*, is encouraged. It is recommended all the time. It can be given to the righteous, the relatives. *Sadaqat* should not be given from wealth of doubtful source. *Sadaqat*, unlike zakat, can be given to the non-Muslim. Reminding the recipient of *sadaqat*, *al mann*, is unlawful. *Sadaqat al tatawu'u* is best given in secrecy. Priorities in *sadaqat* are the relatives. *Sadaqat* is not given to the rich or the able-bodied.

Regulations & Etiquette, *ahkam & adab al zakat*

Zakat can be paid in kind or as cash. The computation of *zakat* on live-stock and agricultural produce is made in kind and then converted into cash if need be. Normally *zakat* is paid at the end of the *zakatable* year. It however can be paid in advance before it is due. *Zakat* arrears are also due and payable. *Zakat* on joint property is computed on the total property; it is illegal to divide up the property and allocating portions less than the *nisaab* to each partner in order to avoid payment. *Zakat* is preferably given to relatives if they are among the categories of *zakat* beneficiaries. *Zakat* can also be given to a wife provided no deception to avoid payment of *zakat* or *nafaqat* is involved. *Zakat* can be given to orphans. It is illegal to buy back any article given as *zakat* to the poor

Zakatable Wealth, *nisaab*

Zakatable property includes metals, paper money, trade goods, crops, and livestock. *Zakat* is levied on property kept in possession for 1 year. Quorum, *nisaab*, is a minimum *zakatable* wealth specified for gold, silver, dates, camels etc. *Zakat* is levied on gold ornaments worn by women. *Zakat* is levied only on specified and not all crops with a different rate for naturally and artificially irrigated crops. *Zakat* on crops is due at the time of harvest. The *zakat* rate for money is 1 in 40 or 2.5%. The quorum is 100 dirhams kept for 1 year. No *zakat* is levied on a horse or working cattle

Beneficiaries Of Zakat

The Qur'an has mentioned the following eight categories of *zakat* recipients: the poor, *faqiir*; the indigent, *maskiin*, *zakat* administrators, '*aamiluuna 'alaiha*'; new/potential Muslims, '*muallafat al quluub*'; slaves in bondage who need funds to be buy their freedom, *fi al riqaab*; prisoners; the heavily indebted' and those struggling in the way of Allah, *sabilullah*

Administration Of Zakat Collection And Distribution

The individual can compute and give *zakat* directly to the poor or any of the categories of legal recipients. *Zakat* can also be given to charitable organizations. A non-governmental

community organization may collect and distribute *zakat*. The government could collect and distribute *zakat*

Hajj

Obligation, *taklif*

Hajj is obligatory once in a life-time on adult sane Muslims who are financially and physically capable. Financial ability is judged by enough funds travel expenses and family maintenance. Physical ability is judged as security of the road, health, a *mahram* for a woman, or two trusted women traveling together. Jihad, caring for parents and the family take precedence over hajj. Proxy hajj can be performed for both the living and the dead.

Public Health & Safety

Environmental hazards of hajj include air-borne and food-borne infections, fire, heat and stroke. Physical exhaustion is common. Patients on regular medical treatment should bring their medicine with them and continue taking it regularly. The heat of Hejaz may exacerbate skin diseases. Moisturizers should be used to treat dry skin. Regular exercise before going for hajj prepares the body for the physical rigors of hajj. Foot wear to protect the feet should not break laws of *ihraam*. A skin cream can be used to protect against severe sunlight.

Regulations & Etiquette Of Hajj, *ahkaam wa adab al hajj*

Pilgrims undertake hygienic measures like bathing, shaving or trimming hair (head, axillary, and pubic) and the moustache, cutting nails. Men wear only the *rida* and *izaar* but no sewn clothes or shoes. Women wear ordinary clothes but cannot veil their faces. Hajj can be performed in three variants: *tamattu* (rites of 'umrah are completed rites of hajj), *ifrad* (rites of hajj before rites of 'umrah), and *iqraan* (hajj and 'umrah are performed simultaneously). Those choosing *tamatu'u* and *iqraan* there is a *fidyat* of slaughtering a goat or fasting 10 days, 3 in Makka and 7 after return to the home country. *Mawaqit* are sites outside the holy sanctuary of Makka at

which the approaching pilgrim makes the intention to perform hajj. The pillars of hajj and 'umrah are: *ihram*; *tawAAF*; trot between *safa* and *marwa*, *sa'ay*; shaving the hair, *al halaq*. Hajj has the additional pillars of: standing in Arafat, stoning the *jamaraat*, sleeping at Muzdalifat, sleeping at Mina, and the farewell circumambulation. Leaving out any pillar is expiated by slaughtering or fasting. Violation of any of the following prohibitions of *ihram* requires *kaffarat* (slaughtering, feeding the poor, or fasting): sewn garments, perfume, removing nails or hair, sexual intercourse or foreplay, and hunting. The following actions are forbidden for the *muhrim*: marriage contract, sexual intercourse, cutting nails, shaving hair, except for medical purposes like lice which requires *kaffarrat*, and using perfume. The pilgrim prays 2 *raka'ats* before entering the *haram*. *Talbiat* is continued all the time except when making *tawaf* or the trot between *safa* and *marwa*. Circumambulation of the *ka'aba* is 7 times with 2 *raka'ats* being offered at the end. The trot between *safa* and *marwa* is 7 times starting at *safa*. On the morning of 8th of Dhul al hijja the pilgrims move to Mina. Where they pray *dhuhr*, *asr*, *maghrib*, *isha*, and *fajr*. Then they move to Arafat and spend the day. After *maghrib* they start moving from Arafat and spend a night at Muzdalifat from where they pick pebbles after *fajr*. They move to Mina for stoning the *jamaraat* and slaughter. They then cut a bit of hair from both men and women signifying partial release from *ihram*. From Mina they then move to Makka where they perform *tawaf al ifadhat* and are then completely released from *ihram*. They perform the farewell circumambulation, *tawaf al widai*, before leaving Makka. A menstruating woman can do all rites except *tawaf* and may leave Makka without performing the farewell circumambulation. Hormonal regulation of menstruation is allowed to prevent interference with hajj rites. It is recommended to visit the Prophet's mosque in Madina. The following are forbidden because of the sanctity of Makka: hunting, cutting thorns, but laws of homicide apply.

Pilgrimage In Difficult Physical Circumstances

Extreme heat could make the performance of outdoor rites difficult. War & Insecurity in Hejaz or on the way could interfere with hajj. If a pilgrim can not be assured of safety of person and property, he can discontinue the hajj wherever he is and return another year. Disease epidemics in Hejaz or on the way are a reason for delaying hajj and taking other precautionary public health measures. Other causes of difficult circumstances are famine, drought, and overcrowding.

Pilgrimage Of The Sick, *hajj al mariidh*

The physically disabled can circumbulate the ka'aba riding on a vehicle or being carried by another person. The weak can leave Muzdalifat earlier to avoid the crowds. The very old and those with debilitating chronic diseases can ask another person to perform hajj on their behalf. However if the disease is curable it is better to delay hajj until the next year. In case of a fracture, hajj is stopped and is repeated the next year. If disease occurs during hajj, the sick can be carried to Arafat because al hajj Arafat and missing Arafat is missing the whole hajj. They are assisted to complete the other rites as much as is possible.

Tilawat Al Qur'an

Tilawat; Objectives, Importance, Obligation, & Reward

The 2 objectives of this modules are regular recitation of the Qur'an as *ibadat* and improving the recitation of the Qur'an, *tajwid al Qur'an*, such that each letter is pronounced correctly. Tilaawat is important and is enjoined. It is a reason for reward, *thawaab*.

Etiquette Of Tilawat

The reciter should avoid *lahw*, *laghw*, *dhahk*, and *'abath*, and interruptions. He should have concentration, presence of the mind, *hudhuur al qalb*; *khushu'u*, serious deliberation, *ta'abbur*; *sima'u* & *insaat*; and weeping. Recitation can only be interrupted for returning greetings, *radd al salaam*. Ablution and cleanliness of clothes and body are required. A person

without wudhu cannot touch the Qur'an but can read from memory. A person in post-sexual ritual impurity, janaba, can neither touch the Qur'an nor read it from memory. A menstruating woman cannot touch the Qur'an but is allowed to recite from memory. She is however allowed to touch books of tafsir and translations of the meanings of the Qur'an into other languages. The place of recitation must be clean, quiet, and calm. Tilawat is not allowed during tawaf, at Arafat, at Muzdalifat, and at the jamarat. It is permitted while standing or walking. Recitation starts with *isti'adhat*. Basmalah is recited at the start of every *surat* except surat al baraa. Prostration is required at verses of prostration, *ayat al sujud*. It is recommended to ask for forgiveness, mercy and making dua at appropriate verses. Recitation ends with '*subhana al laahu al adhiim*'. There is no evidence for saying '*sadaqa al laahu al 'adhiim*' at the end of a Qur'anic recitation. Reciting should be with a good voice and not hurried. Recitation in silence is better than loud recitation

The Mushaf

Choose a Qur'an whose font size and style is most comfortable to you. Familiarise yourself with the *Othmani* script, *khatt/rasm othmani*, of the Qur'an that is used uniformly to preserve the sanctity of the text. The *Othmani* script differs from modern Arabic writing, *khatt imlai*, in some aspects. Different prints of the Qur'an have minor variations in script.

Regulations About Tilawat

Follow the rules of recitation, *ahkam al tajwid*, and pay attention to all the signs in the text. The best way to learn pronouncing each letter correctly, *ikhraj al huruf*, is by listening and watching a good reciter followed by practice in front of him for correction. It is allowed to get payment for teaching Qur'an but not for its recitation. Speed of reading should never make you neglect observation of all the rules of recitation. Watch out for the following regarding mispronunciation of letters, *lahn*: confusion of *za* with *dha*, *sa* with *tha*, *thad* with *thad*, '*ain* with *alph/hamzat*, *sin* and *sad*. While reading rapidly it is common to transpose the marks for

fatha, kasra, dhamma, and sukuun which could in some cases change the meaning.

Rules Of Recitation, *Ahkaam Al Tajwiid*

For proper recitation the rules about the following must be mastered: diacritical marks, attributes of letters, and rules of starting and stopping. The reciter must know rules about specific letters: hamza, feminine 't', miim, nuun, laam and alif. The rules of *madd* must also be known. Various speeds of recitation can be used. *Tahqiiq* is slow and calm reading with deliberation that is suitable for beginners. *Hadr* is rapid reading suitable for a knowledgeable individual reciting alone without neglecting the rules. *Tadwiir* is a speed between *tahqiiq* and *hadhr* that should be used by a group of knowledgeable recites.

Transactions

Fiqh al Mu'amalaat

Civil Transactions, *mu'amalaat madaniyyat*

- Marriage
- Divorce & Annulment, *talaaq & fasakh*
- Inheritance, *al mawariith*

Financial Transactions, *mu'amalaat maaliyyat*

- Sales, *buyuu'u*
- Personal Loans, *quruudh*
- Investments
- Endowments & Gifts, *awqaaf & hibat*
- Other Transactions

Legal Transactions

- Crimes, *jinayaat*
- Legal Competence, *ahliyyat*
- Etiquette Of The Judge, *Adab Al Qadhi*
- Pleas, *Da'wa*, And Evidence, *Shahadat*
- Judgment, Conviction, And Punishment
- Forensic Evidence
- Medical Malpractice

Marriage, *munakahaat*

Prospective Spouse

Three conditions must be fulfilled in a prospective husband: adulthood, desire for marriage, and financial ability. The pre-conditions for the bride are less stringent than the male. The minimum age at marriage is 9 years. She must have a desire to marry. There are no financial conditions. Desirable characteristics in a spouse are religion, beauty, pedigree, lineage, wealth, social compatibility, and professional status. Religion is the most important. Looking at the prospective spouse is allowed and includes pre-marital screening for

disease and genetic traits. Marriage proposals can be made by men or women. It is forbidden to propose when a previous proposal is still being considered or has been accepted. It is forbidden to make any marriage proposals, direct or allusive, during the period of waiting after a reversible divorce. It is forbidden for the prospective spouses to be secluded in private without a *mahram*.

Forbidden Marriages

Marriage is prohibited on the basis of blood relationship, breastfeeding from the same woman, difference of religion, and joining closely related in marriage to the same man. A Muslim cannot marry a polytheist. There are disagreements among jurists about marriage of people of the book. *Mut'at*, a marriage contracted with the knowledge that it is for a limited period, is forbidden. *Tahliil*, marrying and then divorcing a thrice-divorced woman to make her eligible to remarry her former husband, is forbidden.

Marriage Contract And Mahr

There are 4 pillars of marriage: pronouncement and acceptance, the *waly*, the bride, and the groom. No marriage is valid without witnesses or a *waly* (guardian). The *waly* must be a close male relative, a Muslim, and of sound judgment. In the absence of a *waly* the Muslim judge or any other male authorized by the bride can act as *waly*. The groom must be a Muslim. The bride can be a Muslim or from the people of the book (Yahuudi and Nasaara). Marriage to a man or woman who is a *mushrik* or *murtadd* is forbidden. Marriage must be by free consent of both spouses irrespective of gender, age, or previous marital status. Marriage by coercion is invalid. *Mahr* is obligatory for validity of a marriage and makes sexual intercourse lawful. It is fixed by the bride before marriage and remains her. It is not returned in case of divorce or death of the husband if the marriage was consummated. Its payment can be delayed either in full or in part by mutual agreement of the spouses. The unpaid *mahr* is a debt that is due to be paid. Marriage must be made known publicly. A marriage feast,

waliimat, is a highly recommended *sunna*. Conditions in the marriage contract are respected if they are not repugnant to the Law. Examples of acceptable conditions are stipulations about monogamy and country of residence. A marriage contract is invalid if contracted during hajj. Marriages contracted before conversion to Islam are valid in Islam. A *batil* marriage contract is void. Those involved are committing *zina* and their children are illegitimate. A *fasid* marriage contract is irregular and does not imply *zina* or illegitimacy of children.

Conjugal Rights & Obligations

Rights must be balanced against obligations. Both are mutual. The husband has a higher degree of responsibility and authority because of extra legal obligations. The husband and wife have mutual sexual rights. The financial obligations of the husband are *mahr* and *nafaqat*. Failure to provide *nafaqat* is grounds for nullification of marriage. Unpaid *nafaqat* is treated as a debt. *Nafaqat* is suspended during the wife's rebellion, *nushuuz*. *Nafaqat* is obligatory in the period of 'iddat except in the case of *khulu'u*. It continues for a divorced pregnant woman until delivery. By mutual agreement the divorced mother is entitled to wages for looking after the infant. Spouses are a source of comfort, *sakiinat*, for each other. Mutual kind and tolerant treatment between the spouses is needed in marriage. Ill-treatment of the spouse is forbidden. Mutual good treatment, *husn al mu'asharat*, is ordained. The wife can go out of the house for good reasons and with her husband's permission. She can not go on long journeys without a *mahram*. The husband is entitled to leave the home during the day to work.

Rights Of Children And Parents

Children have rights protected by the Law. They have to be breast-fed. They have to be given a good name that will not embarrass them. They can not be deprived of inheritance. All children are entitled to equal treatment; however handicapped children can be singled out for preferential treatment. Parents have rights from their children that include: kindness,

obedience, and honor. The rights of the mother are emphasized more than those of the father. Disobedience of parents is a major sin second only to polytheism, *shirk*. Parents must be respected even if they are non-Muslim. Insulting parents is *haram*. Parents must consent before their children can join *jihad*.

Divorce & Annulment, *talaaq* & *fasakh*

Divorce

Divorce is in the hands of the husband. He can commission someone else (man or woman) to effect the divorce. He can also give the right of divorce to the wife, *tamliik*. Divorce cannot be valid unless the husband is adult, sane, and does so voluntarily. It has no legal effect if it is by coercion, by a honest mistake, or by forgetfulness. An oath to divorce can be broken with atonement. Reversible divorce is limited to a maximum of 2 divorces. Return, *ruj'at*, is allowed during the waiting period, *iddat*, for 1 or 2 divorces. Divorce can be conditional. It is lawful in the inter-menstrual period. It is unlawful divorce during the menstrual period. It is unlawful in the inter-menstrual period if the possibility of pregnancy exists. Special rules on *iddat* and return of mahr apply to the following special situations: wife who is pre-menarche, post menopausal wife, pregnant wife, and a wife with whom no sexual relations have ever been had. A husband can divorce his wife in his terminal illness (death-bed) but her rights of inheritance from him are not affected. During the waiting period, each spouse can inherit from the other

Death Of The Spouse

The marital relation is automatically annulled on the death of the spouse. The wife's mourning period for a deceased husband is 4 months and 10 days. If the husband is lost, the wife remains legally married until definite information on the death of the husband is received. In another ruling the maximum waiting period is set at 4 years after which the woman observes '*iddat*' for 4 months and 10 days and can then remarry. Some other rulings base the maximum waiting period on the expected maximum life-span.

Annulment Of Marriage, *fasakh al nikaah*

A wife can apply to court for marital annulment for male impotence (persisting for more than a year) and the husband's withholding *nafaqat*. Other reasons for annulment are female anatomical or functional disorders that prevent coitus, disease, change of religion, and cruelty (physical or emotional). *Khuluu*, marital dissolution in return for a wife paying a sum of money to her husband, has the same effect as a 3-time divorce except that remarriage is possible without consuming a marriage to another man. Marriage can also be annulled by the process of mutual li'aan if the husband accuses his wife of adultery without 4 witnesses.

The Waiting Period, 'iddat

The purposes of 'iddat are to ensure the wife is not pregnant, to provide an opportunity for reconciliation, and to provide gradual transition from married to divorced life. No waiting period is prescribed in cases of divorce before sexual intercourse. A once or twice divorced woman can continue her marriage by returning to her husband before completion of the period of 'iddat and without a new marriage contract. If the 'iddat expires she can remarry her former husband under a new contract. A thrice divorced woman cannot remarry her former husband only after consummating a marriage with another man. 'Iddat for a divorced pregnant woman ends with delivery. If the woman committed adultery with or had artificial insemination from another man, her *iddat* is the equivalent of three menstrual cycles. The 'iddat for a post-menopausal woman is 3 lunar months. The *iddat* for a lactating woman (no menstrual periods) is three lunar months. The 'iddat for a pregnant woman whose husband dies is the delivery of the baby. The 'iddat of non-pregnant woman whose husband dies is 4 months plus 10 days. A woman divorced before sexual intercourse does not have to observe 'iddat but can be given a gift.

Custody And Child Care, *khadhanat & ri'ayat*

The father has legal custody. The mother has physical custody until the age of 7 when the child is asked to choose between the

2 parents. The conditions of physical custody are upright character, Islam, and sanity. Either parent can lose physical custody if any of the conditions of the custodian is violated. Physical custody is lost on remarriage of the mother but not that of the father. The father, whether he is the custodial or non-custodial parent, is obliged to provide child support. He also has to provide financial support to a divorced pregnant wife until delivery and may continue during 2 years of breast feeding unless he employs a wet nurse. Boys who are in the mother's physical custody must stay with the father during the day for training. If a wife gives birth to a baby while legally married to a man, the child belongs to the man. This position holds even if the marriage was not valid, i.e. did not fulfill all the criteria. A child born through adultery belongs to the legal husband. The aim of the Law is to protect the interests of the child. The father can deny paternity by the process of *liaan* if he has valid proof. Paternity cannot be denied on the basis of suspicions. Legal adoption that suppressed information and links to natural parents is forbidden.

Inheritance, *al mawariith*

The Will, *al wasiyyat*

The will is a testament by a living person that can be executed before or after death. An executor is appointed for the bequest. If the father is living he is automatically the executor. The will was obligatory at the beginning. This obligation ceased with the revelation of verses spelling out the share of each inheritor. The will is now used for property that the deceased wishes to leave to non-inheritors or charitable bodies. Conditions may be attached to the execution of the will. The usual rules of evidence are applied to test the validity of a will. The physician, often the last person to be in contact with the deceased, may be called upon to witness the will. The physician may have to advise the deceased about the conditions and limitations of the will. Some wills in terminal

illness may not be valid because of doubts about the mental and legal competence of the patient. The maximum limit of the will is one third of the total estate unless all the inheritors agree to a higher proportion. The inheritors cannot be beneficiaries of the bequest. A wide range of beneficiaries is allowed: Muslims, Yahuud, Nasaara, apostates, killer of the deceased, a heir (if all heirs agree to this), the unborn child, charitable organizations, and *waqf* bodies. The will can be cancelled at any moment before death. It is also considered automatically canceled if the beneficiary dies before the death of the bequestor.

Conditions Of Inheritance, *shuruut al irth*

Inheritance can not take place until the death of the deceased is certified beyond any doubt. The inheritor must survive the inheritee even if for a short time. A new-born born alive has full rights of inheritance. The relationship between the inheritee and the inheritor must be established beyond doubt. There are only two types of relationship: based on blood relationship or based on marriage. Illegitimacy prevents inheritance between a father and a son. It is also a bar to inheritance between uterine brothers. The inheritee and the inheritor must be of the same religion. A Muslim can not inherit from a non-Muslim and vice versa. The gender affects the share of inheritance. The Law has prescribed complicated procedures for dealing with cases of indeterminate gender. A prisoner of war or a lost person does not lose their rights of inheritance. The problem arises when it can not be established whether they were living at the time of the death of the inheritee. The Law has also prescribed measures to deal with this type of uncertainty.

The Inheritors, *al warathat*

Inheritors are descendants (son, daughter, son of son, daughter of son etc), predecessors (father and mother), brothers and sisters (full brother, paternal half brother, maternal half brother, paternal half sister, and maternal half sister), spouses (wife and husband).

Denial Of Inheritance, *mani 'u al irth*

A potential inheritor who in the official discharge of duties is a factor in the death of the inheritee is prevented from inheritance. Intentional homicide prevents a person from inheritance. Accidental homicide with intention to hurt prevents from inheritance. Accidental homicide with no intention to hurt prevents from inheritance. Any person who is a contributory factor to death can not inherit. For example a prison officer who carries out a lawful judicial execution can not inherit. The strict rulings above are a deterrent that removes any incentive to kill a relative in order to inherit his or her property. In cases of unintentional homicide, an innocent inheritor is denied the right of inheritance under the general principle of the law that public interest supersedes individual interest.

Estate Division

One half is given to 2 categories of inheritors: (a) The husband of a deceased who has no children takes one half of the estate (b) a sole daughter or sister. One quarter is given to 2 inheritors: a husband of a deceased who has children and the wife of a deceased who has no children. One eighth is given to only 1 inheritor: a wife of a deceased who has no children. One third is given to the mother. Two thirds is given to 2 or more daughters or sisters. One sixth is given to sister, brother, or mother. There are three types of universal heirs: *'aasib bi nafsihi*, *assib bi ghayrihi*, and *'aasib ma ghayrihi*. Owners of shares are given their due and whatever remains is shared among the universal heirs with males taking twice what females take. There are two types of *hajb*: *hajb nuqsaan* and *hajb hirmaan*. In *hajb nuqsaan* an inheritor's share is lessened by presence of another inheritor who is a *preventor* for example if a deceased wife has no children her husband inherits half of her estate; if she has children the husband inherits only one quarter of the estate. In *hajb hirman* the presence of one inheritor denies another inheritor any right to inheritance.

Sales, *buyuu'u*

Goods And Services

All transactions are permitted unless there is specific prohibition. Individual ownership of property is a basic human right. Community ownership is allowed for some property. Governments and companies are legal persons with rights of individual ownership. All articles are halaal for commercial transactions unless specifically prohibited. The following articles cannot be bought or sold in normal commercial transactions: intoxicants, khamr; pictures, idols, humans, dead animals, dogs, pigs, semen of animals, and stolen property. Knowledge cannot be sold but teachers, authors and publishers sell their labor and costs of materials. The buyer a book has full rights to use of the knowledge including teaching it to others for a fee. He however cannot reproduce and resell the book. Halaal services can be sought and can be offered for a fixed fee. It is prohibited to seek, pay for, or offer haram services. Rights are a form of intangible property that can be bought and sold. Debts can be bought, sold or transferred. Inheritance rights cannot be sold. Scales and measures are used to specify amounts of goods in transactions. The seller is responsible for measuring but the buyer has a right to verify before they separate. A trader is free to sell at profit, murabahat; at cost, tawliyat; or below cost, wadhi'at. Bargaining, musawamat, is allowed. The Law does not interfere in the operations of the free market unless there is exploitation or immoral effects are feared. The Law does not mandate price control. It however requires that action be taken to ensure that unfair practices of hoarding and monopoly do not arise. Monopoly can be allowed if it is in the public interest.

Contracts

A contract may be oral or written. A contract document should specify that this is the complete and final agreement. An enforceable contract must have 3 elements: an offer, an acceptance, and consideration (mutuality of obligations). A

valid contract may not be enforceable because of illegal contract terms, use of duress or undue influence to conclude the contract, fraud or misrepresentation, lack of capacity or competence to contract, mistakes, or impossibility of conditions that are referred to as acts of God. Two conditions and 2 sales are not allowed in one contract to avoid misunderstandings. If a contract is faasid, transfer of ownership is not valid and goods as well as the money must be returned. The customary price is assumed if the contract does not specify one. The physician-patient relation is a type of contract whose breach will trigger negligence or malpractice suits. Health insurance and other aspects of managed care involve contractual obligations.

Conditions Of A Valid Transaction

Business transactions should be written and witnessed. No condition repugnant to the Law is permitted in the contract. Ownership must be transferred as soon as possible. Any transaction can be cancelled before separation. The buyer has the right to return defective goods. Any gain or loss is the responsibility of the buyer during the period when goods can be returned. Arbitration, al sulh, is used in disputes.

Types Of Transactions

The following transactions are permitted: barter; advance payment for goods, salam; purchase on credit, nasiiat; auction, muzayadat; sale of an absent article, ghararat; and sale on commission. The following transactions are forbidden to remove uncertainties, to assure fair play, and to prevent cheating: sale of agricultural produce before maturity, paying a pre-fixed price for goods chosen when blinded, closing eyes the buyers and sellers, pre-arrangement between the auctioneer and a false buyer to raise prices, selling on top of a brother's sale, selling fur while still on the animal, selling sadaqat before it is received, buying an animal while it is still in utero, selling milk in udders, selling fish while still in water, combining 2 transactions in one transaction, selling what is not in possession, combining a loan and a sale, sale of a non-

refundable deposit, buying and selling on the spot without taking possession of the goods, and selling debt for debt. Riba transactions are forbidden. The recipient of riba, the giver, the writer, the witness, the legalizer, and for whom it is legalized all commit an sin. Riba has more than 70 types such as *riba al nasii at* and *riba al fadhl*. Riba can be camouflaged as a legitimate transaction such by selling on credit and buying the goods back at less than the credit price or by changing a debt to a sale with an increase. It is permitted to quote the price of goods in one currency and receive payment in another currency provided payment is immediate and in full.

Etiquette Of The Market

A dua is said on entering the market. All transactions must be suspended for salat. Transactions should be written and witnessed. Generosity, leniency, and full disclosure should be observed. Swearing, raising the voice, and hoarding are forbidden. Brokerage and middlemen are allowed

Personal Loans

Conditions

Debts must be written and witnessed. If it is not possible to write, a collateral can be taken. A debtor is obliged to pay back. Delay of debt payment by those with ability to pay is a punishable offence. A debtor who has the means to pay and refuses to settle his debt can be imprisoned or beaten to force him to fulfill his obligations.

The property of the debtor can be seized to settle outstanding claims. No gifts can be accepted from a debtor because that may be a form of riba. If the value of the currency increases or decreases, the debt is paid back in the same currency in which it was borrowed with no adjustment for inflation or deflation. If the debt was taken in a currency that is subsequently abolished by the government, payment is due in the amount of the new currency equivalent to the old currency on the day of the transaction. A date whose payment is due at a future debt after the death of the debtor remains a liability on the inheritors.

Collateral, *rahn*

Rahn ensures that the debtor will endeavour to pay back. It is taken if the debtor fails to pay. Rahn is needed especially if the debt is not written down in an agreement. The contract for rahn must be written clearly to avoid disputes between the raahin and murtahin. The contract must make it clear that this is a debt with rahn and not a sale. Taking delivery is a condition for validity of the rahn as Allah says in the Qur'an 'rahn maqbuudhat' however in a situation of difficulty in which physical delivery and reception are not possible this condition may be ignored. The rahn may be material goods, animals, land, plants, or a house. If the rahn is a house the debtor is not allowed to stay in it without the permission of the creditor. Anything that is legal to sell can be used as rahn. The holder of the rahn cannot benefit from it in any way. Any benefits that accrue to him is deducted from the amount of the debt. Any sale of a rahn is faasid. If the rahn is destroyed due to negligence of the holder there is 'no refund, la dhamaan. If however it is spoiled due to negligence then it has to be refunded. The rahn is sold if the term of the debt passes without payment. The rahn can only be sold by the judge and in the presence of witnesses.

Guarantee

A debtor could get another person who can vouchsafe for his honesty and ability to pay to act as guarantor. It is permissible to guarantee an unknown person, yajuuz dhamaan al majhuul as in. The guarantor of a debt is liable to pay if the original debtor fails to fulfil his obligations.

Transfer Of Debts, *hawala*

It is permitted for a debtor to transfer the responsibility of paying the debt to another person. Transfer of a debt to a rich person is irrevocable. Transfer to a poor person may be cancelled and the liability of the original debtor is maintained. Transfer of a deceased's debt is irrevocable. It is also possible for the creditor to transfer the right of collecting the debt to someone else.

Bankruptcy

A debtor becomes bankrupt when his assets are less than the liabilities. Creditors can take back property from a bankrupt debtor. They take whatever they find of the debtor's property. If a creditor finds his property, he takes it back unless it has increased in value. In case of a generalized economic collapse in the community and not an isolated individual failure, the property of the bankrupt is not sold because his condition may improve. Financial support, *nafaqat*, on the self and the family has precedence over debt payment. Settling a debt has precedence over performing *hajj*. A bankrupt cannot give a *rahn* without the permission of the creditors. After sale of the bankrupt's property, any restrictions on him are lifted. The property of a bankrupt person is sold by the judge to settle his debts. The following are the only items left with the bankrupt: a house, what he uses for trade if he is a trader, and tools if he is a craftsman. However these may also be taken if they were bought using loan money that led to the bankruptcy. When the property of the bankrupt is sold, the wages of laborers are settled before the debts of creditors. When all the property of the bankrupt is sold, he has no more debt liability even if the proceeds of the sale did not cover the whole amount owed.

Investments

Investment In Property

Partnership, *sharikat*, is in general allowed. People can jointly own and use articles such as food. They can buy property such as a house jointly and sell it later for profit. The partner in a joint property has the right of pre-emption, *shuf'at* and must be informed before any sale of the joint property is done.

Investment In Trade

Business partnerships, *musharakat*, can take several forms: pooling of capital, *sharikat al amwaal*; pooling of human resources, *sharikat al abdaan*; pooling of goodwill or contacts, *sharikat al wujuuh*, or any combination of the above.

Murabahat is pooling of capital that is invested. The partners agree to a fixed proportion of profits or losses. It is illegal to fix a certain amount as the profit due to a partner because that would constitute *riba*. *Mudharabat* involves pooling of capital and human resources and is co-operation between the owner of capital, the worker and the manager. *Mudharabat* can be by merchandise and not money. There is a pre-fixed proportion of sharing losses and profits. In case of loss, outstanding liabilities are deducted from the remaining capital and the worker just suffers loss of time.

Investment In Agriculture

The owner of the land may work it himself. He can use hired labour who are paid wages and have no share in the produce. The landowner may let a farmer cultivate unused land for free or in return for a fixed rental, *ijaarat al aradh*. The farmer is entitled to all the produce of the land. The Law allows sharecropping, *muzara'at*. The landowner and the farmer agree to share the produce according to agreed formula. The formula must state a proportion of the produce. It is *haraam* to fix each partner's share by weight. The landowner may contribute agricultural inputs like seeds and fertilizers. Sharecropping was agreed between the prophet and the Yahuud at Khaybar. *Mukhabarat*, a form of gambling that is letting a farmer use land in return for the produce of a delineated portion of the land, is forbidden because it will be a source of dispute when the delineated plot does not produce well.

Deposits & Trusts, *wadii'at*

The trustee does not pay if the trust is destroyed accidentally. He pays for depreciation due to his use of the property. The concept of *wadii'at* has been employed in modern Islamic banking schemes.

Insurance

Insurance can take two forms: proprietary or mutual. The proprietary form is the un-Islamic form found in non-Muslim society. It is insuring a risk that is a type of gambling and

involves cheating because any member who pulls out or fails to keep up the premium payments automatically loses all contributions made over many years. In mutual insurance, the members are insurers and insured at the same time. It is a natural extension of the mutual support, *takaful*, that is found in the Muslim community. Thus Islamically-sanctioned insurance is a joint investment. Funds contributed as premiums are invested in *mudharabat* ventures. Each member has two accounts: a personal account and an account in which are placed funds used for pay-outs to the families of those who die early. Islamic financial institutions have developed an Islamically-acceptable insurance scheme called *takaful*.

Endowments & Gifts, *awqaaf* & *hibat*

Definition

Waqf is continuous charity. It consists normally of fixed property whose income is used for a fixed purpose. The income is used but the endowed property is never sold or donated or inherited. The waqf may be for specified beneficiaries or may be left open. Waqf can be immovable property like real estate. It may be movable property. It could also be a service. Waqf may be endowed for a limited time.

Rulings About *Waqf*

If the waqf is plants or trees, it ceases with the death of those trees and they are not replanted. It is permissible to make a mosque a waqf and this type of waqf is *mustahabb*. If one masjid cannot use all the income from its waqf, it is permissible to use the extra income for another masjid. If the waqf is on a masjid but the waaqif does not specify how it will be distributed, then it can be used for the imaam, the muaddhin, and the building. If the beneficiaries of a waqf are a group of people who die away, the waqf is returned to the waaqif or his relatives or to the Muslim Treasury or to the poor. If the waaqif does not specify the beneficiaries or if the documents are lost, the waqf is treated like that of beneficiaries who die off. If the waqf changes for example a farm becoming a factory, the waqf continues. The waaqif in nominating

beneficiaries must distinguish between a beneficiary as an individual and a beneficiary because of his attributes. For example the waqf may be for a specific imaam of a masjid or it may be for the position of imaam such that anybody who holds that position can be a beneficiary. Jurists have disagreements on whether a waqf that is no longer beneficial can be sold. A waqf can be changed from one form to another if there is a maslahat. The endowment may be conditioned on the death of the endower, ta'aliq al waqf bi al mawt, in which case it is taken from one third of the property. It is not permissible to repossess an endowment if one has a need for it. It is not permissible to spend from the waqf to settle the debt of the waaqif after his death. Generally the waaqif should not benefit from the waqf except in public facilities such as mosques. In terminal illness, the inheritors cannot be beneficiaries of a waqf. It is permitted to apportion a waqf among beneficiaries like $\frac{1}{2}$ or $\frac{1}{4}$. Making children as beneficiaries of a waqf for the sole purpose of preventing loss of property from the family has no basis in the Law. Rich offspring, dhuriyyat, cannot be beneficiaries of waqf but the poor among them can. However if children are made beneficiaries of waqf, the distribution among them is like that of inheritance.

Administration Of The Waqf

The waaqif appoints the administrator of the waqf. If he does not the judge appoints one. If the conditions set by the waaqif are not fulfilled, the waqf is returned to him. The administrator is entitled to a salary. The text of the waaqif is like the text of the law and must be followed closely except if they stipulate something clearly illegal. If they differ from the Law they can be changed until they are in conformity with the Law. If the administrator of the waqf fails to fulfill the conditions set it is taken from him.

Gifts, *hibat*

A gift is given during the life of the giver whereas a will is after his death. Sadaqat is better than a gift unless the gift is for a relative for purposes of silat al rahm. Gifts express mutual love. Gifts seeking praise are condemned. It is permissible to

give a gift if that will stop dhulm. It is forbidden to ask for a dua in return for a gift. Gifts can be accepted and something is given in return. A gift should not be accepted if the giver expects help in reaching officials. A gift can be witnessed especially if future disputes are anticipated. It is an offence to ask for return of a gift. The gift becomes confirmed when the beneficiary takes possession.

There is no harm in canceling a gift before the beneficiary takes possession. Repossession of a gift occurs when the reason for it is no longer valid. The recipient of a gift has the right to give it away without getting permission from the gift giver. Gifts to officials are discouraged because they may encourage bribery and corruption. The ruler of Muslims can accept a gift from a mushrik. It is permissible to give a gift to an unknown person, *al hibat li majhuul*, who is specified afterwards. A child cannot make gifts even if the guardian consents. In the same way the safiih cannot make gifts. Children should be treated equally in giving gifts. According to Imaam Ahmad equality among children is achieved if they are given gifts in proportion to their share of the inheritance. According to Imaam al Safe'i girls and boys may be given equal gifts. It is however allowed to give some children more gifts than others if all children agree to that. It is also permissible to base the amount of the gift on the differing needs of the children as long as this does not exceed what is considered customary. It is also permissible to refuse giving gifts to any child who is a sinner until he repents. The father is allowed to withdraw a gift if by that he wants to achieve equality among children. This could happen for example if a man gives a gift to one of the children and then immediately after that falls sick. He is then allowed to withdraw the gift in order to equalize among the children. He can also withdraw the gift for fear of exceeding one third. The beneficiary is also required to return the excessive gift. Jurists have differing opinions about a father who gives gifts to some children and dies before giving to others. Some jurists say that the children who did not receive should be given from the property of the

deceased to achieve equality. Others say that the matter is left as is and the father has a sin. Anything that a father gives his daughter as he prepares her for marriage becomes her property when she moves to her husband's house. Gifts given to a wife are not returnable if the marriage is nullified. A wife may absolve her husband of the obligation of mahr as a gift to him but this is not allowed in terminal illness because it may be a form of will and the Law prohibits any will that benefits an inheritor. A father is allowed to take from his son's property without permission provided he uses it for his needs and does not give it to others as charity or as a gift and provided this does not cause financial harm to the son. This is based on the hadith of the prophet 'anta wa maaluka li abiika'. The child is also obliged to serve his father and the father can forbid his son from jihad because jihad would prevent the son from serving his father.

Other Transactions

Wage Employment, *ijarah*

Ijarah is employment in return for wages. Living on earnings of one's labor is honor. Earning a living from a despised job is better than begging. Agreed wages should be paid in full. Early payment of wages is required. If the employer invests unclaimed wages, he will have to pay the employee the profits earned. Non-payment of wages is a serious crime. It is allowed to take a salary for teaching fiqh and hadith if the teacher is in need. It is however not permissible to pay a person to read Qur'an as a donation to a deceased. Payment for ruqya is allowed. Any earnings from astrology is haram.

Leasing/Renting, *i'arah*

Iarat is when you lend someone an animal to benefit from the milk and he returns the animal after that. It is not permissible to rent a house to someone who will use it for ma'asiyat.

Stock Exchange

Stocks bought in a company are an infusion of capital. The buyer of the stock benefits when the company profits thus

raising the value of the stock. The stock can also fall in value if the company performs poorly. Stocks can be sold and bought from others at any time. Stock transactions involve an element of speculation but unlike riba transactions they do not guarantee any profit, both profit and loss are likely. The consensus of scholars is that stock transactions are permitted unless the company involved is trading in forbidden goods or is undertaking prohibited activities.

Commodity Exchange

This is a highly speculative activity involving buying and selling commodities like oil and crops that are not yet produced. There are special exchanges where commodity contracts can be sold or bought with loss or profit.

Currency Trading

Currency exchange is allowed of no delay in involved. Exchange of the same amount of currency must be done at once. Gold can be sold for silver in any way you like. A dinar can be exchanged for a dinar if the transaction is carried out on the spot. Gold cannot be sold for silver on credit.

Free Trade

Freedom of exchange of halaal goods and services within the country is highly desirable because it produces an efficient economic system. Free trade at the international level may not serve national or ummatic interests in some cases and care must be taken.

Public Debt

Government expenditure can by design or unpredictably exceed the revenues necessitating borrowing to cover the deficit. The citizens, including those not yet born, will be responsible for paying this debt in the form of taxes.

Lost And Found

The lost, al luqtat, is announced for one year then it is placed in the property of the finder. Hiding a lost item is prohibited. The finder's fee is called al ja'ala.

Crimes, *jinaayaat*

Crimes Against Religion

Crimes against religion are apostasy, breaking vows and oaths, neglecting or refusing to perform obligatory *ibadat*, sorcery and superstition, and *asabiyyat*. Apostasy is voluntarily leaving Islam by an adult sane person. Conviction is upheld if an apostate refuses to repent after repeated advice. A vow is made to affirm that a certain action will be taken. An oath is taken to affirm that the oath-taker is speaking the truth. The atonement or expiation for broken vows or oaths is feeding 10 poor or fasting 3 days. Advice, admonition, or even disciplinary punishment are imposed for neglecting obligatory duties of *salat*, *zakat*, *saum*, and *jihad*. Refusal to perform these duties out of belief they are not obligatory is apostasy. Sorcery, astrology, foretelling, and divination, charms, and amulets are forms of *shirk* and are forbidden. *Asabiyyat* (special feeling of attachment to a group) in its mild form helps intra-group mutual assistance and cooperation. It becomes a crime when it is used as a basis for discriminating, persecuting, or committing other acts of transgression against people who are outside the group on the basis of race, color, ethnicity, gender, etc

Crimes Related To Life

Crimes related to life are suicide, homicide, and bodily injury. Suicide may be direct destruction of life or indirect by risky and dangerous living. It brings severe punishment in the hereafter. The funeral prayer is not offered suicide victims. The death penalty is prescribed for deliberate pre-meditated homicide unless the family forgive or accept *diyat* instead. *Diyat* is imposed for non-intentional or accidental homicide. Retaliation or *diyat* are imposed for bodily injury. Genocide and feticide are forms of homicide with severe punishments.

Sexual Crimes

Sexual crimes are fornication, unnatural sex acts (sodomy, sex with animals, masturbation), false accusation of *zina*, rape, transsexuality, pornography, and incest. Conviction is upheld

for sane adults who commit adultery voluntarily as witnessed by 4 adult, sane, Muslim, and reliable witnesses who describe exactly the penetration of the penis into the vagina. The conditions of conviction for sodomy are the same as those of fornication. Sex with animals has severe punishment. Masturbation is offensive but some jurists permit it if it prevents zina. Conviction for false accusation of zina is upheld if the accuser cannot produce 4 adult, sane, Muslim, and reliable witnesses to the acts of fornication. Rape is a severe crime that involves violence and violation of honor and modesty. Pornography and sexual exhibitionism are a prelude to serious sexual crimes. Trans-sexuality in all its forms is prohibited. Incest is a severe crime for which the death penalty is imposed.

Crimes Related To Property

Crimes related to property are theft, robbery, fraud, forgery, cheating, riba, and gambling. Conviction for theft is based on various considerations: stealth, no ambiguity about ownership, and a minimum amount stolen. The snatcher, the dishonest, and the embezzler are not punished as thieves. Robbery is use of force in taking property. It may be highway robbery or may be by forcibly entering dwellings. Riba is criminal exploitation and not trade. It involves taking property of others wrongfully. The giver, the recipient, the writer, and the witness of *riba* are equal in crime. Giving and receiving bribes is a crime.

Crimes Against The Community

Crimes against the community are use of intoxicants, armed rebellion and aggression. Every intoxicant is *khamr* and every *khamr* is *haram*. An intoxicant is what clouds the mind. Conviction is based on taking the intoxicant and not on whether it had an effect. It is illegal to engage in armed rebellion against the *imaam*. If such a rebellion is threatened or if it occurs, the *imaam* should start by redressing the grievance. If the rebellion persists, military action is taken using just enough force to suppress the rebellion and not to destroy life or property. There is no compensation for property destroyed in a rebellion. The wounded and the prisoners are not killed.

Fugitives are not pursued. Aggression can be against a person or property. *Ghasb* is forceful appropriation of property. The appropriated property must be restored. Land can also be appropriated. A Muslim is obliged to defend the self, the family, and other persons against potential homicide. He is also obliged to defend property. Minimum force is used. Resort to killing is there is no other way to stop the crime.

Legal Competence, *ahliyyat*

Conditions Of Ahliyyat

A legally competent person makes decisions and takes actions on his person and property and is responsible his actions of commission or omission. Actions cannot be valid without legal competence. Competence is not the same as capacity. The defining conditions of legal competence are intellect, '*aql*'; puberty, '*buloogh*'; knowledge, '*ilm*'; and civil liberty or freedom, '*hurriyat*'. The main condition is that of intellect. All the others depend on and support it.. No human action can be carried out well and correctly without using human intellect correctly.

Rights And Obligations, *huquq & wajibat*

The fundamental rights represented by the five Purposes of the Law, '*maqasid al shari'at*', cannot be denied on the basis of gender, age, sanity, disease, or legal incompetence. Their exercise is regulated by Law in cases of legal incompetence. Each of the 5 fundamental rights has rights and obligations. The obligations of the individuals vary and depend to a large extent on the legal competence.

The different rights and obligations of males and females are not related to competence but to different roles in society. Legal competence is of two types: competence with regard to acquisition of rights, '*ahliyat al wujuub*' and competence with regard to execution of obligations, '*ahliyat al adaa*'. Both types can be full, '*ahliyyat kamilat*', or deficient, '*ahliyyat naqisat*'.

Privileges Of The Legally Competent

The legally competent person has full rights regarding his person, *nafs*, and his wealth, *maal*. A legally competent adult must be able to fulfil commitments and obligations. He also acquires rights as a result of commitments and promises made to him. A legally competent adult is responsible for all his acts of commission or omission. He has obligations under the law that he has to fulfil. The obligations however vary. The law considers the age of 7 years as the age of discrimination, *sinn al tamiiz*. Between the age of 7 and puberty and depending on the speed of development, a child may have intellectual competence to make correct decisions about some matters but no actions can be valid unless approved by the legal guardian. After the age of 7, the obligation of prayer is enforced though not with the same rigour in adults.

Restrictions On The Legally Incompetent

Impediments that exempt an adult from performance of obligatory duties, *mawaniu al taklif*, may be voluntary, *mawaniu al taklif al ikhtiyariyat*, or involuntary, *mawaniu al taklif ghayr al ikhtiyariyah*. The voluntary impediments to legal competence, *mawaniu al taklif al ikhtiyariyat* are also referred to as acquired, '*awaridh muktasabat* are ignorance, *jahal*; intoxication, *sikr*; and jest, *hazal*. Involuntary impediments to legal competence, *mawaniu al taklif ghayr al ikhtiyariyat* are insanity, *junoon*, mental retardation, *safah*, loss of consciousness, *ighma*, infancy and childhood, *sigar*, terminal illness, *maradh al mawt*, forgetting, *nisyaan & sahaw*, absence of mind, *ghaflat*, sleep, *nawm*, menstruation, *haidh*, errors, *khata*, coercion, *ikraah*, and flight, *safar*

The Concept Of Wilayat

Legal guardianship, *wilayat*, is legal authority given to a guardian, *wali*, to make and carry out decisions regarding the person, *nafs*, or wealth, *maal* of a legally incompetent person. The decisions of a guardian are binding.

Etiquette Of The Judge, *adab al qadhi*

Attributes Of The Judge

The judge must be a Muslim, male, legally responsible, *mukallaf*, with full legal competence, *ahliyyat kaamilat*, and full civil liberty, of upright character, *'adl*, of mature and balanced personality, with no ulterior motives, sufficiently educated and knowledgeable about the Law, able to use *ijtihad* to extract legal rulings from original sources, physically and psychologically healthy, of sound hearing and sight, able to communicate verbally in the language used in the court.

Court Etiquette

Judgment is not made when the judge is in a state of anger, physiological stress, physical or mental exhaustion. The litigants are equal in status before the judge. No judgment is made before listening to both sides in the dispute. A judge will have to excuse himself if his personal physician or a member of his family is one of the litigants. The atmosphere of the court should command respect: tranquil, somber, and with gravity. The secretary records proceedings. Cases are scheduled on a first come first served basis unless there is an emergency situation. The judge should not be hasty in judgment. He can change his decision if he gets new evidence

Judicial Bias

A judge cannot receive gifts, entertainment, or borrow from anyone in the community because one of them could become a litigant at some time in the future.. Judge cannot decide cases involving close relatives, business associates. Judge cannot decide cases involving his associates in business

Financial Compensation

The position of judge is a communal obligation, *fardh kifai*. The ruler may appoint a judge. Any two disputants can reach mutual agreement to select a knowledgeable person to be a judge between them. The position of the judge is a communal responsibility that carries no financial compensation. Payments are made to the judge in lieu of the time that could have been spending seeking sustenance for him and the family.

Justice And Mercy

The judge must be objective and just even if he is presiding over a trial of opponents. The judge must maintain due equilibrium between the requirements of justice and mercy. The impact of the judgment and the punishment on the accused and the family must be considered alongside with the requirements of justice.

Pleas And Evidence, *da'wa & shahadat*

Court Procedure

Court proceedings start with complaints, *da'awa*, by the plaintiff. The specific charge must be read out to the defendant with care being taken to make sure he or she understands all elements of the charge. If the claim is false it is ignored. If the claim is true the defendant is asked to enter a plea of guilty or not guilty. Care must be taken to ensure that the defendant understands and appreciates the implications of a guilty plea. If the defendant pleads guilty, he is convicted and punishments or other legal sanctions will apply. If the defendant pleads not guilty the plaintiff must produce evidence. If the plaintiff cannot produce evidence the word of the defendant is accepted on taking an oath, *al yamiin 'ala al mudda'e 'alayhi*. If the plaintiff produces evidence the defendant is allowed the right of cross-examination. The defendant can also introduce evidence of character as a defense. The plaintiff, *mudda'i*, has to prove his claim, *al bayyinat 'ala al mudda'e*. The defendant is considered innocent until proved guilty. Evidence is oral testimony that fulfils all the conditions of *'adalat* and is binding on the court. Testimony by witnesses is a communal obligation that cannot be refused (2:83). Professional evidence is evaluated like any other source of evidence and need not be accepted all the time. In cases of *huduud* the judge is not allowed to base his judgment on his personal knowledge of the circumstances of the case. In non-*huduud* cases the judge can base his judgment on personal knowledge of the circumstances of the case. Attestation of good character is by both men and women is considered by the court.

Methods Of Proving A Claim

The methods of proving a claim are admission or confession, *iqraar*, oral evidence, *shahadat*, oath, *yamiin*, documentary evidence, *wathaiq*, medical evidence, and expert witness, *ra'y al khabiir*. Circumstantial evidence is not used as a basis of judgment.

Conditions For Accepting Evidence

The conditions for accepting evidence: *qat'i* and not *dhanni* ie proof beyond any doubt, capacity and competence of the witness, acceptable witness, '*adl*: (free with full civil liberties, *hurr*, legally responsible, *mukallaf*, can speak, mentally awake, of upright character, outwardly respectable, *mur'at*). The defendant may give testimony voluntarily. He however has a right of silence as a privilege against self-incrimination. The burden of proof is on the prosecution. The physician is not obliged to volunteer as a witness.

Criteria Of Assessing Evidence

In civil cases the standard of proof is balance of probabilities. In criminal cases the standard is proof beyond any reasonable doubt: *dhabt*, *jarh* & *ta'adiil*. *Dhabt* is used to refer to rigor in memory. *Jarh* and *ta'diil* refers assessing the reliability of the witness. '*Adl* is a term is used by scholars to hadith to refer to a Muslim who is an adult, intellectually competent, who does not commit major sins, and does not repeatedly commit minor sins, and who has no trait that destroy social respectability, *mur'u'at*. *Dhaahir al Muslim al adaalat*. *Yajuuz li al qaadhi an yahlifa al shuhadaa*. The internal consistence of the evidence can also be used as a criterion of validity. Judgment can be made on the basis of only one witness.

Forensic Evidence

In *munakahaat* medical evidence is used to determine age at marriage, degree of consanguinity, impotence & other causes of failure to consummate marriage, disputed parenthood, period of gestation, mental capacity, and medical defects for marital dissolution. In *mawariith*, medical evidence is used to

determine intellectual competence of the testator, life of inheritor at death or the inheritee, gender, possible contribution of inheritors to death. In mu'amalaat, psychological assessment of competence of contractees and orphans (to be given their property). Forensic evidence is used for conviction and determination of diyat in homicide and body injury. In sexual crimes forensic science is used for determination of rape but not for zina for which a hadd punishment is prescribed.

Judgment, Conviction, And Punishment

Considerations In Judgment And Conviction

A crime can be committing the prohibited or neglecting to do what is obligatory. Punishable offenses are referred to courts, non-punishable offenses are for Allah. Punishments can be *huduud*, *qisaas* and *diyat*, or disciplinary, *ta'azir*. *Huduud* crimes are: fornication, *zina*; false accusation of fornication, *qadhif*; robbery, *hirabat*; taking intoxicants, *khamr*; and rebellion, *baghyu*.

Hudud Punishments Relating To Sex, Khamr, And Life

Crimes that involve *qisaas* and *diyat* are killing or injury either deliberate, semi-deliberate, or accidental. Conditions for conviction are intellectual competence, *aql*; age of maturity, *buloogh*; voluntary action, and evidence. For *zina* 4 witnesses are required. The punishment is stoning, *rajm*, for a previously married person and 100 lashes with exile for a convict with no prior sexual experience. The punishment for *qadhaf* is 80 lashes. The punishments for rape and sodomy are death. *Khamr* is defined as any substance that clouds the mind or consciousness. The punishment for taking *khamr* is 40 lashes. Retaliation, *qisaas*, is prescribed for deliberate homicide, *qatl 'amd*, unless the victim's family forgive or take diyat instead. Diyat is prescribed for semi-deliberate killing, *qatl 'amd khata*, or accidental killing, *qatl khata*.

Huduud Involving Property And The Community

Punishment for stealing is severing the hand if a minimum of 1.058 grams of gold is stolen from a secure place. The death sentence is prescribed for highway robbery, *qati'u al tariq*

Ta'azir Punishments

Ta'azir is a punishment that does not amount to a *hadd* punishment ie no more than 10 lashes. The purpose of *ta'azir* is to discipline and prevent repetition of the crime. *Ta'azir* can be a physical punishment such as lashing. *Ta'zir* can take the form of psychological punishment such as enforced exile. *Ta'azir* can also be in the form of imprisonment.

Role Of The Physician In Punishments

The roles of physicians in criminal punishments are: assessment of physical fitness of the convict for punishment, assessment of injury for purposes of *qisaas*, and assessment of *diyat*.

Forensic Evidence In Transactions

Forensic Evidence In Munakahaat

Medical evidence is used to stop marriage of the physically and emotionally immature. It is used to uphold marriage of a girl whose guardian claims she is too young. It is used to prove age in case of disputes. Chromosomal analysis is used to establish consanguinity. Medical evidence based on chromosomal and genetic testing can be adduced to establish whether intending spouses are related. Medical evidence is used to certify libido and consummation of marriage. Premarital medical examination (genetic, physical, and psychological) is part of the permitted looking at a prospective spouse. This examination can include examinations. Pre-marital tests for potential fertility. Medical evidence for biological parentage can be based on Blood group analysis, DNA analysis, physical resemblance, and physical examination for ability to procreate. Medical evidence on the duration of a viable pregnancy is used to settle some disputes on parentage.

Forensic Evidence In Divorce

Divorce is not recognized in cases of insanity, medical or psychological stress, and if under the influence of psychoactive substances. Medical science can be used in analyzing reasons for divorce: cruelty (physical and psychological), denial of sex (fear of infection or physical harm), and defects in the spouse (debilitating disease and insanity) preventing normal marital life and sexual intercourse. Hatred or detest of a spouse can be valid grounds for marital dissolution if it is not due to a curable psychosis or neurosis. Divorce or khulu'u in terminal illness do not abolish inheritance rights. Divorce is discouraged in pregnancy and forbidden in menstruation. Medical evidence of parenthood based on chromosomal and genetic analysis makes li'aan irrelevant. The period of iddat is fixed by the Law and cannot be abridged on the basis of pregnancy tests that prove that there is no pregnancy from the previous marriage.

Forensic Evidence In Mawariith

Medical assessment of intellectual competence is necessary before the will is accepted. If medical evidence certifies that a fetus was alive at the time of death of the inheritee, that fetus has a right of inheritance. If the sex can be determined in utero then the division of the estate can proceed even before birth. Cases of multiple pregnancy can be diagnosed in utero and division of the estate is made. If the baby is born alive it inherits. A stillborn can inherit if it can medically be certified that he was alive at the time of death of the inheritee. Medical evidence using modern technology is able to settle the issue of gender definitively one way or the other removing many of the complications and uncertainties of the past. The law does not recognize inheritance of an illegitimate child from the father but does so from the mother. A child denied by inherits only from the mother. However inheritance is possible in such cases if parenthood can be established based on medical evidence. A relative who contributed even indirectly to the death of the deceased cannot inherit. This holds for all types of death: judicial execution, premeditated, mistake, and indirect.

The Law is very strict that the inheritor must survive the inheritee even if for a brief moment. If 2 persons who can

inherit from one another die together, medical science can help resolve the problem by forensic determining time of death.

Forensic Evidence In Mu'amallat

Medical science is useful in several business transactions. Psychological assessment is needed to establish legal competence in cases of disputed contracts. Assessment of the maturity of orphans is needed before they can be given authority over their inheritance. Evidence of insanity is needed in court cases about restricting the insane in disposal of his property. Public health physicians protect against fraudulent or dangerous transactions by inspection of food, drinks, and drugs. Exposure risk assessment is needed to protect workers or those exposed to environmental pollution. Screening of organs and tissues for transplantation is needed to ensure no transfer of infective organisms.

Forensic Evidence In Homicide

Forensic science can help shariat courts by providing evidence of the following types: identification of the deceased using DNA analysis and blood grouping; determining the manner and cause of death, estimating the time of injury, estimating the time since death; Identification of the dead may involve gender determination using forensic dentistry, forensic anthropology to determine gender, age and race using the skeleton, height, and weight. Gender identification. determining extent of injury to determine compensation in cases of diyat; deterring mechanism and causes of injury to determine the type of retaliation or compensation; deterring the time of injury; and forecasting the progress of injury and eventual functional loss. Autopsy is the main forensic examination.

Forensic Evidence In Sexual Crimes

The use of forensic science in solving sexual crimes had a very interesting beginning in the ummat. A woman was very fond of one ansari and tried all means to seduce him with no success. She decided to take her revenge by accusing him of raping her. She put some egg albumin on her clothes and between her

thighs to appear like semen. Omar Ibn al Khattab had at first believed the woman but on consulting Ali the judgment was changed. Ali carried out a simple forensic test by pouring hot water on the alleged semen to remove it from the cloth. He then tasted it and discovered that it was egg albumin and not semen. The woman confessed her deception. Forensic science can assist shariat courts establish facts in cases of rape (DNA analysis), fornication; abnormal sexual acts; takhannuth; and istirjaal. Proof of penetration in rape may not be easy in women who have had prior sexual experience. The physician will look for signs of trauma, tearing of the hymen, and deposition of semen. DNA analysis helps identify the assailant. Proof of impotence may be introduced as evidence against accusation of rape. The hadd of zina cannot be established on the basis of forensic findings. It must be based on 4 credible witnesses who can describe the illegal sexual act. Pregnancy tests can be introduced as evidence in cases of alleged fornication or rape. Medical proof of virginity may be needed in cases of alleged fornication. Recent abortion may be proved by physical and hormonal examinations.

Medical Malpractice

Definition And Description

Malpractice is failure to fulfill the duties of the trust put on the physician. The term malpractice includes the legal concept of medical negligence. Negligence is breach of duty owed by the physician to the patient resulting in damage or injury. Negligence is defined according to the customary standards of care that are established by the profession. There are 4 elements in medical negligence: discharge of duty, breach of duty, injury, and burden of proof. Medical negligence may be breach of duty resulting in causation of injury which calls for damages. Negligence may also arise as battery which is injury due to intentional tort (a civil wrong in which liability is based on unreasonable conduct). The intentional torts are assault, battery, treatment without informed consent, false

imprisonment or confinement, intentional infliction of emotional distress, and defamation (slander if verbal and libel if written). Negligence also arises from abandonment of a patient or breach of confidentiality. Negligence also arises in liability for drugs and devices and as vicarious liability. A physician is also found negligent for negligent referrals, failure to warn about risks, and failure to report a notifiable disease. Negligence also covers professional errors. The errors may be ordinary or extraordinary. They may be harmful or non-harmful.

Types Of Liability

The following are types of liability: physician liability, professional errors, neglect of duty, vicarious liability, liability for defective products, and special types of causation. Physician liabilities include lack of informed consent, errors, and neglect of duty. Professional errors may be ordinary or extra ordinary. They may be harmful or non-harmful. Informed consent or express instruction of the patient does not relieve the physician of liability for errors. The physician is liable for discontinuing treatment without justification. Vicarious liability is when someone is made liable for a negligence they did not personally perform for example the employer. The supplier is liable for defective products.

Basis Of Liability

Liability is based on breach of contract, the tort of negligence, and breach of confidence. The physician-patient relation establishes a contractual relation that can be breached. The tort of negligence is invoked when there is breach of duty that leads to injury of either the patient or a third party. Three ingredients must be proved: (a) the physician owed a duty of care (b) the physician failed in that duty (c) the failure resulted in damage. The physician may also be liable for breach of confidence. The physician-patient relation is based on confidence.

Malpractice Suits: Court Procedure

The statute of limitations states that there is a fixed period after the breach during which tort action can be brought. The legal

process follows several steps: filing a complaint by the plaintiff, serving a summons on the defendant, plea of guilty or not guilty by the defendant, discovery (lawyers for both sides collect more information by interviews, examinations, and collection of documents), opening statements at the trial by both sides, testimony and examination of witnesses, closing arguments, and judgment. The burden of proof of breach of standard of care lies with the plaintiff. Proof of breach is based on a balance of probabilities, on the 'but-for' test, and on causation of damage or risk. Physician defense against malpractice suits rests on absence of duty, no breach of duty, lack of causation, and lack of damage. Instead of a trial, alternative dispute resolution procedures may be used: arbitration, mediation using an expert facilitator, fact finding and investigation of the case by an expert. Damages can be awarded for personal injury, death, wrongful birth or wrongful life, emotional distress, economic loss, and breach of confidence.

Avoiding/Prevention Of Malpractice Suits

Malpractice suits can be avoided by obtaining and maintaining registration, sticking to defined professional standards of care, peer review, quality assurance, use of protocols, defensive medicine and politeness with patients. The best protection against medical negligence is the conscience of all health care workers to make sure that mistakes do not occur. Well written records can be a defense for the physician.

The Community

Fiqh al Jamaat

Family

- Gender
- The Family As A Natural Social Unit
- Marriage
- Parents And Relatives
- Children

Community Institutions

- *Masjid*
- *Ukhuwwat*
- *Takaful*
- *Shuura*
- *Maal*

Social Problems

- Life-Style
- Sexual Perversions
- Addiction
- Poverty
- Violence

Social Action

- *Dawa*
- Enjoining Good And Forbidding The Bad, *Amre & Nahy*
- Social Change, *Taghyir Ijtima'i*
- Professional & Occupational Organizations
- Social Welfare And Disaster Relief Organiza-Tions

Gender

The Gender Issue

Islamic Law assigns roles, rights, and obligations based on the acknowledgement of similarities and differences between the genders. The Qur'anic concept of parity, *zawjiyat*, is the basis for complementary relations between males and females.

Issues of equity, equality, justice, and division of labor are associated with parity. Males and females are from the same creation (7:189). Males and females are allies of one another (9:71). Males and females get reward equal to that of men for work that they do (4:124). Women's opinions are respected (58:1). Women participate in the political process (61:12). The testimony of one woman is equal to that of one man (24:6-9) except in some business transactions. Women fought side by side with men (Muslim 3:1001, Chapter 743, Hadith #4453). Despite many equal or similar challenges and responsibilities, women should not behave like men because they are different (Bukhari 7:513, hadith #773).

General Principles

Women and men are equal in their religious, ethical, civil rights, duties and responsibilities (16:97). Exceptions are very few and arise because of different responsibilities (4:34) or differences in basic biological nature. The Qur'an assures religious equality (3:175, 9:71-72, 16:97), ethical equality (3:195, 9:71-72, 16:97), and civil equality (60:12, 5:38, 24:2, 4:32). Men and women are from the same creation. They have equal worth, equal moral and legal status, equal religious and educational rights, and equal reward for equal or equivalent work. Women and men are equally challenged in some activities and are unequally challenged in others. Women have their individuality, responsibility, and accountability independent of men. Islam fosters a dual and not unisex society. There should be no competition between the genders but interdependency. Women are allies of men. Men and women need one another.

Gender Differences

Each gender should accept its identity and not try to compete with or emulate the other (4:32). Biological, psychological, and emotional differences between the genders are Allah's plan for a balanced society and do not confer consistent advantage or superiority to one gender to the disadvantage of the other. There are very few established and consistent gender differences. Men are superior to women in visual-spatial

abilities and quantitative abilities. Women are superior to men in verbal ability. Males and females communicate differently.

Equity and Equality

Different does not automatically mean unequal. What is needed is equity and not similarity. The rules of Sharia and acts of worship in Islam apply equally to men and women. There are only a few differences in the details due to different natures of men and women and role prioritization. Islamic law gives the women full competence to own and dispose of property before and after marriage. Working outside the home is allowed if it does not hurt the family and rules of modesty and interaction with the other gender are followed. Islamic law forbids forced marriage of women. The sharia allows a woman to propose marriage. She can accept or reject any suitor. A woman can legally obtain a divorce from an unwilling husband. Men have special leadership roles in a conjugal relationship. It must however be remembered that the relationship started with free consent of the woman. The Law places very few restrictions on women. Most verses are restrictions on men to prevent their transgression against the rights and modesty of women.

The Law Of The Woman

The woman is a human being like the man. She is not responsible for the original sin; Adam and Hawa were equally guilty. Her work is accepted by Allah as much as is the work of the man. She is not a bad omen. She has the right to inherit and the right to own property. She is equal to the man in rights and obligations. The woman differs from the man in the amount of diyat, the amount of inheritance, and giving court evidence. There are gender-specific regulations for taharat, ibadat, dress, and child custody. The rest of the Law makes no distinction between men and women. The woman has a right to work. The work may be 'amal duniyawi or'amal ukhrawi. "Amal ukhrawi is obligatory for both men and women. Work of the duniya, 'amal al duniya, for purposes of earning a living is obligatory for men, waajib 'ala al rijaal, and mubaah for women if certain conditions are fulfilled. The woman has a role in public leadership.

Family As A Natural Social Unit

Family: Structure And Function

The family is both a social and biological unit. Members are related by either marriage or parentage. The family has sexual/reproductive, social, psychological, and economic functions.

Rights And Responsibilities

Each member of the family husband wife, or child, has both rights and responsibilities. In a healthy family, members fulfill their obligations and responsibilities before demanding their rights. Both parents are jointly responsible for the upbringing of their children (*aqidat*, emotional, physical, psychological, and social). Each of the spouses has rights and responsibilities to the other.

Leadership In The Family

The husband is the legal and customary head of the family. His leadership is based on more responsibilities. He is legally responsible for the financial up keeping of the family. There are many aspects of the family's life in which the wife's leadership must be recognized because she is the specialist. The extent of the wife's responsibility varies by culture and custom. The wife is the primary educator of children shaping their character and personality. The wife and children must obey the head of the family in order to keep the family united and orderly. He in turn should listen to and respect the opinions and interests of all members of the family. A family cannot survive if there are two equal and competing heads. A wife who wants the success of her family and its happiness will defer to the husband's leadership role.

Success Of The Family

Habits for family success are learned from childhood. Careful selection of the spouse is necessary. Any defects found after marriage are either corrected or are tolerated. Spiritual development is by remembering Allah often, praying in the home regularly, inculcating *iman* in the children, following the sunnat and reading the Qur'an regularly. The family library

should contain good books and audio-visual materials. *Shura* should be established by discussing family matters with the spouse and children. Children should not see conflicts between parents. The head of the family must exercise control over family activities with compassion and firmness. He should monitor what the children are doing. Meal and sleep times must be fixed. All members of the family should cooperate in the household work. Members of the family can joke and have fun with one another. The family should buy only what it needs. Indebtedness must be avoided. In order for members of the family to interact and develop the necessary bonds, they need time together and privacy from the rest of the community. Family secrets should be kept within the home. All members of the family must feel secure in their home physically, financially, psychologically, and emotionally. Members of the family may have to make sacrifices to make sure that their families are secure. The sacrifice may be time, financial or even accepting some inconveniences and humiliations.

Family Destruction

Since a successful family is the basic building block of society, its destruction means destruction of the whole society. Family destruction could be due to internal or external factors. The internal factors are zina and its antecedents. The external factors are: socio-economic and political stresses. Family destruction is prevented by education, tarbiyyah, early marriage, following the sharia, maintaining the privacy of the home, avoiding ziba, and avoiding the antecedents of zina (ikhtilaat, khalwat). A moral social environment, a comfortable socio-economic environment, and respect for human rights protect families from destruction.

Marriage

Purposes And Nature Of Marriage

Marriage is a natural institution that is encouraged. It is a civil contract that is legally valid under these conditions: 2 adult

witnesses, question and answer, and mahr. Unlike other civil contracts, it cannot be concluded for a limited duration. No conditions repugnant to the sharia can be valid in a marriage contract. Marriage is a source of psychological, social, and emotional tranquility and stability. It protects from sexual corruption. It provides the best social structure for childbearing and child rearing. The ideal age for marriage varies by gender and society. Exogamy and monogamy are preferred. Polygamy is allowed in some situations and forbidden if justice cannot be maintained. Success in marriage depends on selection of the right spouse, spousal compatibility (psychological, emotional, socio-economic and culture), and tolerance and adjustment for incompatibilities. The qualities looked for in a husband are religious commitment, kindness, a gentle attitude to women, intelligence, strength of personality, a good family background, a known lineage, knowledge of the Qur'an and sunnat. The qualities of a prospective wife are: religion, pedigree, wealth, and beauty. The best and permanent value is religion (Islam, iman, taqwat). A good wife is patient, humble, charitable, sincere, loyal, trusting, supportive, obedient without feeling inferior, peaceful, cheerful, modest, chaste, and respectful of the husband's parents, relatives, and friends.

Success Of Marriage

The pillars of marriage are pronouncement, witnesses, wali, bride, and bridegroom. The prospective spouses must be of legal age and legally competent. Social equality and financial ability are desirable but are not necessary condition. Exogamy is preferred for medical reasons. Mahr establishes the woman's financial independence. A good spouse is the best asset on earth. Each spouse must be prepared to adapt and to try to do what will please the other one. The following factors determine success of failure of the relationship: successful communication, love and empathy, kindness, mutual respect, mutual understanding, respect for rights and responsibilities, sexual attractiveness, conflict resolution and control of jealousy.

Marital Dysfunction

Marital failure manifests in the appearance of the home, and behavior of the 2 spouses. The general atmosphere in the home is unhappiness. There is depression, loss of interest, and demotivation. The following are possible causes of marital problems: sexual dysfunction, poor communication, infidelity, incompatibility, mental illness, personal incompetence of either spouse, social stresses, social dysfunction, and poor communication. Misunderstandings should be minimized. The best policy is to avoid conflict by each spouse doing what pleases and avoiding what annoys the other. Unresolved conflicts could lead to spousal physical or emotional abuse. Primarily the two spouses talking to one another and finding the cause of conflict should solve conflicts. If they cannot resolve the matter they should seek arbitration by people of wisdom and character.

Marital Failure

A marriage can be dissolved by death, divorce, or annulment by a court of law. Although permitted, divorce is the most hated of the permitted things. Reconciliation should be attempted before the final divorce. Even after divorce, good treatment of the wife is enjoined by the institution of the post-divorce financial support. When a divorce occurs, both spouses are partners in the failure. The following factors are related to the risk of divorce (1) Socio-economic (SES) differences between spouses (2) a big age difference or both being too young (3) financial difficulties. Divorce is preceded by (1) withdrawal of love (2) lack of attention to the needs of each spouse (3) belittling (4) criticism. Divorce impacts both the spouses: anger, depression, and a feeling of relief if the relation was abusive. Children of divorce are affected economically and emotionally. They cannot understand what happened. The effects are long-term. The signs and symptom of family failure are bad physical appearance of the home (dirt, poverty), poor behavior and interaction of family members (conflict, laziness, lack of outings and regular meals). The house is not organized

and is often dirty. Conflict is the commonest manifestation of family failure. Love and mutual help are replaced by acrimony and bad feelings. Conflict is commonest between the spouses. It could also occur between parents and children or among the children. Other members of the extended family may also be involved. Lack of routines and regular meals are manifestations of lack of leadership and initiative in a failing family. Laziness indicates lack of purpose and low motivation.

Parents And Relatives

Good Treatment Of Parents, *birr al waalidayn*:

The Qur'an has in many verses enjoined good treatment of parents. Good treatment of parents is one of the most loved work to Allah, is a reason for entering heaven, and has great rewards. Good treatment covers both the father and the mother. The mother has preference in companionship. *Birr al walidayn* includes doing good for them, honoring them, praying for them, and extending the good treatment to their friends. The friends must be respected during the life and after the death of the parents.

Duties To Parents

Parents must be respected and never shown any contempt whatever their behavior. Each spouse should show consideration to the parents of the other spouse like his or her own parents. Talking to parents must be polite without raising the voice. Righteous parents should be followed. Parents must be obeyed as long as they do not order committing a sin. Their reputation and wealth must be kept. Attempts must be made to do what pleases them. They must be consulted in all matters and apologies must be offered them if for some reason their advice cannot be followed. There must be an immediate response when parents call. Kindness and generosity to parents in their senility and weakness is only a partial repayment of their efforts when the children were young. Gratitude for the parents' suffering and sacrifices must be shown. Their friends

must be treated with generosity. The following are done for them: standing up to greet them, kissing their head, helping them with their work, and visiting frequently.

Mistreatment Of Parents, *uquuq al walidayn*.

Parents cannot be abused, insulted, or cursed. Cursing or mistreating parents is considered one of the major sins and leads to severe punishment. Allah responds to parents' dua against their children. The voice should not be raised in the presence of parents. Parents must always be told the truth and no lies should ever be told to them whatever the excuse. The grandchildren and spouses cannot be preferred above parents in any situation. Generosity must be extended to parents; miserliness to them should be avoided. Parents of others should never be mistreated or insulted. They may insult your parents as a return and you will have caused injury to your own parents.

Birr Al Arhaam

The near kindred are described in the sunnat. The Qur'an enjoins good treatment of the near kindred. This includes feeding them, giving them financial support, joining kindred relations, and loving them. They have definite rights that should not be violated and these include rights of inheritance as enunciated in the law of inheritance. There is great reward for joining kindred relations. A person is rewarded for good companionship with relations. It is sin to cut off kindred relations. Doing good for relations is expiation from sins. Kindred relations are more deserving of charity. It is duty to call the kindred relations to Islam. However love for kindred relations should not stand in the way of establishing the truth.

Relations As Social Insurance

Islam teaches joining kindred relations and castigates cutting them off. The extended family is supposed to be an association for mutual material and psychological support. Good relations within this association ensure that help will be available at the time of need.

Children

Growth And Development

Growth refers to increase in body size. The stages of physical growth are: infancy, early childhood, middle childhood, adolescence, young adulthood, middle adulthood, and old age. Development increases functional specialization and capability. It includes both maturation and increasing experience. It has biological, cognitive, and social aspects. It is a continuous process. Later development builds on earlier experiences. Breast-feeding by the mother is strongly emphasized because it is the best nutrition in the first stages of growth and also has important psychological effects. Development impairments early in life could affect the capacity for development later in life. Parents must be aware of the rapid growth and development of children and should adapt their parenting to the requirements of each stage of growth and functional development.

Relations Of Parents And Children

A child must belong to a set of parents, a family and a community. Lineage is the basis of self-identification and self-esteem. The name influences self-concept, identity, and self-esteem. Love for children is natural and ensures protection and for the children. The love for children and their treatment should be the same for all regardless of gender. Parent communication with children must be open, honest, mutual, nurturing, and consistent. Parents must have time to play with their children. Successful parenting requires a high tolerance level for children. Children's actions and behavior cannot be judged by adult standards. Each child is an individual; each is different. Parents should teach the following to children: love of Allah, loving jannat, hating jahannam, salat by age 7, reading and memorization of Qur'an, telling the truth, avoiding kufir and the prohibited, avoiding shirk, rules of dress especially for girls, using the right hand, basmalah before any activity, adhan and its response, avoiding bad company, bravery, and revenge against the transgressors.

Moral And Social Development

Children are born in a pure and natural state, *firat*; it is the environment that shapes them into either good or bad people. The first 7-10 years are the formative period of personality. Influences at this stage of life, positive or negative, have long lasting impact. The age of legal maturity is defined biologically as either 15 years or the appearance of definitive signs of puberty. Attaining the age of legal maturity does not mean attaining wisdom. Many problems arise from high expectations of legally mature but unwise children. Good manners and attitudes are not taught but are shown to children. The social environment that children are exposed to should be carefully controlled. Children must be guided to understand moral issues. Moral values can be taught by use of stories since young children cannot appreciate abstract notions. Children should be taught the *kalima*, love of Allah, love of *jannat*, reliance on Allah, *salat*, reading *Qur'an*, attending *salat al-Jama'at*, truthfulness, hard work, love of learning, exploration, bravery, and courage. Selfishness should be discouraged. Children should be warned against sins such as: *kufur*, *shirk*, gambling, pornography, and smoking. They should be taught to wear Islamic dress, to use the right hand, cleanliness, and respect for the visitor.

Intellectual Development

Children are not a *tabula rasa*. They certainly are born with instinctive knowledge of their creator. However their data bank is limited. Their ability to learn from the environment is also limited. Development is individual and there are no fixed norms. *Tarbiyah* must be related to the level of intellectual and social development. Genetic endowment determines basic intelligence and its potential or ceiling. Environmental stimulation enables reaching the potential. Children understand and retain information at a level higher than what most parents imagine. Children are born with an inner drive to investigate, explore and learn from the environment that should be used in the learning process. Learning should be a pleasure. Fear or

scoldings are counter productive. A warm and democratic home fosters intellectual growth. The layout, organization and running of the home should be designed to facilitate child development and not for the convenience of adults. The first intellectual skills that should be taught are language skills. Language influences the way people think. The first words that children learn should emphasize Iman. Complex, detailed, stimulating language should be used. Read to children as early as possible. Early interest in books carries through to adulthood. A second language should be taught as soon as the primary language is stable. A second language is best mastered before puberty. Arabic, the language of the Qur'an, is the preferred second language. There should be zero tolerance for colloquial Arabic.

Discipline

Children should be taught obedience. Obedience is an attitude. It starts with obedience of Allah then the parents then those in authority. It also includes obedience of the physical laws and acceptance of social realities. Disobedient individuals tend to be marginal individuals in society; they may commit crimes and cannot be good and religious individuals with stable family life. Obedience should be taught by example. A wife obeying her husband and a husband obeying his parents are very good models for children. Disciplining of children must be firm, fair and appropriate. There must be house rules that are not broken. Too much scolding or belittling is child abuse. Children should be treated as individuals. They must be respected as humans with rights, feelings and concerns. As individuals they have a God-given self-worth and an identity that is unique. Children cannot be the same and should not be expected to behave in similar ways. Neither should you expect your children to be exactly like you. Children must be loved and that love should be shown. Parental love for the youngest children should never be conditional. Preference for either male or female children is an un-Islamic custom. Building self-esteem in children requires time and effort. Teach them to communicate their feelings. Listen to them. Negotiate and compromise with them in matters that are not strict rules. Your disciplining must be fair

and consistent. Give them responsibilities and tasks. Allow them to make some decisions. Have a sense of humor. Give them loving care.

The Masjid

The Roles Of The Masjid

The mosque is the center of the community around which all community activities take place. It is open and active during salat and during non-salat times for community activities. Mosques are built on the basis of taqwa. Ibadat especially salat manifests taqwa. Ibadat activities include salat, i'tikaaf, and dhikr. Regular masjid attendance is a sign of spiritual health and is necessary for community building. The masjid is a forum for tarbiyat and leadership training. The following social services can be provided at the masjid: medical care, health education, disease screening, primary health care, child care, and elderly care. Community administrative affairs can be carried out in the mosque such as muhakamaat and li'aan.

The Regulations Of The Masjid

The masjid should be the geographical center of the community. It should be simple in construction avoiding excessive decoration. Facilities at a modern masjid include: a salat hall, a school, a clinic, social welfare services facilities, and sports facilities. The local community should own and look after its masjid. The main administrative officials of a masjid are the imam and muaddhin helped by other officials as the need may be. All Muslims should have free access to the masjid. Worshippers should be clean in body and dress to show respect for the masjid and those who frequent it. They should come with calmness. A dua is said on entering and exiting a mosque. Two raka'ats are offered on entry into the mosque. The following are encouraged in the masjid: sitting for long periods, offering salat, and frequenting the masjid. The voice should not be raised in the mosque. Weapons and dirty things are prohibited in the mosque. Bad odors are not allowed in the mosque. The following are permitted activities in the mosque:

salat, reading Qur'an, education, medical care, social welfare, political activity, eating, sitting in the mosque, sleeping, reciting poetry, government, The following are prohibited in the masjid: controversial matters, violence, commerce, noise, execution of huduud, selling and buying, sexual relations, and shirk practices.

The Masjid Of Makka

The kaaba is the sacred house, *al bayt al haraam*, the sacred masjid, *al masjid al haraam*, the house, *al bayt*, the sanctuary, *al haram*, or the *ka'aba*. It is called the old house, *al bayt 'atiiq*, because it was the first house of worship to be built by Ibrahim and Ismail. It has been rebuilt several times eversince. The city of Makka is called Makka, Bakka, and Umm al Qura in the Qur'an. It is a city of peace, *al balad al amiin*, that will never be invaded until the Last Day. Plague and Dajjaal will never enter it. The *haram al shariif* is an area around the masjid that has special sanctity. It is an area of peace and security. Temporary visitors to the haram have the same rights as the permanent residents. It is prohibited to carry weapons in the sanctuary. The plants and animals of the sanctuary are protected. The haram has calmness, is a place of ibadat and tawaaf, a venue of hajj, and a qiblat of Muslims. It was also the start of isra and mi'iraaaj. Non-believers and polytheists are not allowed in the sanctuary

The Masjids Of Madina

The prophet declared the area between the two lobes of Madina as a sanctuary. The prophet on arrival in Madina bought land for the mosque and started building. It has been rebuilt and widened several times eversince. There are other mosques in and around Madina. Masjid al Qiblatain is famous because of the change of the direction of the qiblat. The prophet and Omar used to visit Masjid Quba every Saturday.

Jerusalem Mosque, *al masjid al aqsa*

The Jerusalem mosque is also called bayt al maqdis or masjid al isra. It was the first qiblat for Muslims. It is the second mosque. The prophet ordered salat in al masjid al aqsa. Such salat has a lot of good. The dajjaal will not be able to enter bayt al maqdis.

Ukhuwwat

Duties Of Brotherhood

There are several types of brotherhood. *Ukhuwwat insanuyyat* is universal human brotherhood shared by all humans. *Ukhuwwat imaniyat* is brotherhood shared by all believers. *Ukhuwwat islamiyat* is based on self-identification as a Muslim. *Ukhuwwat shaitaniyat* is based on common allegiance to shaitan. *Ukhuwwat nasabiyat* is based on blood relations. Brotherhood is the basis for positive relations among people. The prescribed duties of brotherhood taught by the Prophet (PBUH) are: returning greetings, visiting the sick, following the funeral procession, accepting invitations, and responding to the sneezer. These represent the minimum that a brother must do for his brother. The general duties of brotherhood are taking care of the weak, *ibraar al qasam*, *nasihat* for every Muslim, tolerance of differences, overlooking minor injustices, flexibility, forgiving when annoyed, reconciling between people, loving good for other Muslims, helping the weak and the oppressed, solving problems, fulfilling needs, compassion, kindness, caring giving moral support to others and helping them fight shaitan, protecting the honor of Muslims and not broadcasting their weaknesses, keeping secrets, concealing faults of other Muslims as long as there is no *dhulm*, fulfilling promises and commitments, good behavior and good manners even with evil people, interdependence, maintaining relations, humility, mutual respect, respect for the elderly, respecting leaders of other people, and respecting cultural and personal differences as long as they are within bounds of the Law. The special rights of love and respect are for scholars, parents, relations, neighbors, guests, the poor, the needy, the weak, and the traveller. The following should also be respected in a special way: colleagues, those devoted to Islam, and those with opposing views.

Social Interaction

Formal groups are large and impersonal. Informal groups are small but personal. The family is an informal group that is intimate and personal. A person can belong to several informal

or formal groups at the same time. The term *jama'at* is used to refer to Muslim groups. Relations between people may be positive or negative. Relations must be genuine. Interaction evolves from the stage of initial meeting (*i'ltiqa*), selection, choice and conscious decision to cooperate (*intiqa*), and rising above selfish interests to secure a higher common purpose (*irtiqa*). Social interaction can be cooperation, competition, or conflict. Interdependence is a basis for social interaction. Social power is control the actions of other people. It can be physical, formal authority, or influence. Some control is needed for efficient functioning of society. Social deviation is failure to conform to customary norms.

Social Etiquette

Etiquette of the meal is starting with *tasmiyat*, using the right hand, eating what is in front, being humble, and not criticizing the food, thanking Allah at the end of the meal, attending a meal only by invitation and not bringing along an uninvited guest, a *dua* for the host, and leaving immediately after eating. Forgiveness, humility, and self improvement are encouraged. Spying, pride, anger, jealousy, approaching *zina*, transgression, and hatred are discouraged. The rights of the guest and the host must be respected. Conversation should be polite and moral. Manners of the road must be observed. Unity, cooperation, and reconciliation should be encouraged. The good is enjoined and the bad is forbidden.

Social Diseases, *amraadh ijtima'iyyat*

Dhulm is ruling by what Allah did not enjoin, physical and psychological harassment of others, and violating the rights of others. Corruption is in the form of bribery, nepotism, and favoritism. Mass media cause annoyance for Muslims, backbiting, rumor mongering, mockery, lying, abuse, and false accusations

Takaful

Mutual Social Support Within The Family

Mutual social support in the family includes good treatment of parents, giving help to relatives, child care, and inheritance to

assure financial support for surviving members of the family. The Islamic system of inheritance makes sure that the wealth of the deceased is distributed among as many relatives as is possible so that excessive wealth accumulation can not be transferred from generation to generation.

Mutual Social Support In The Community

Believers are like walls a building that support one another. A person cannot be a true believer until he likes for his brother what he loves for himself. A believer who relieves stress from a Muslim will have his stress relieved on the last day. Kindness and empathy are enjoined. Charity is given to the needy who ask and those who do not ask.

Support For Special Social Groups

Some social groups require more support and attention than others. Orphans must be taken care of and their wealth must not be embezzled. The widow and orphan are weak members of society who have a right to relief. Orphans should be fed and clothed. Travelers are often in need of help when they are far from their communities. Indebted Muslims also need relief when they have no other way of clearing their debts.

The Welfare Society And Social Justice

The community must help the poor in order to establish social justice. Feeding the poor is expiation of sins. Working to help the maskin is like engagement in jihad. Those who feed the maskin have strength of heart. Clothing the makiin is a great action. Zakat is taken from the rich and is given to the poor. Poverty can be relieved by zakat and sadaqat.

Shuura

Over View Of Shura

Shurat al jama is used by the community uses to reach decisions binding on the leaders and individuals. It is a legal obligation with its rules and procedures. Tashawur is discussion of different views to select what is the best without being binding. Being advisory it is neither obligatory nor binding. The prophet consulted his followers. He taught that he who

consults does not regret and does not go wrong. The scope of shura was limited in the lifetime of the prophet because wahy was available. The khukafa al rashiddin used shuura extensively in reaching decisions. With the end of the rightly guided khilafat, shuura was suppressed by the dynastic dictatorships. The decline of the early Islamic state after the khilafat rashidat can be directly linked to weakening of shura. Return of shura is heralding the contemporary Islamic revival. Shura is very important in the community for the following reasons. Decisions reached through consultation are likely to be correct decisions. Shuura decisions that have the support of the people. They ensure unity of the ummah. They are easier to implement than imposed solutions.

Rulings About Shura

Shura is a type of ijtihaad that can be right or wrong. It is obligatory, *wajib*, and binding, *mulzim*. Participation in shuura is a political right for each citizen, male or female. The form of exercising this right is not defined to allow time and space flexibility. Shura can be undertaken by: ahl al hill wa al iqd, the whole jama'at, the ulama, or specialists in various fields. Ahl al hill wa al iqd who are knowledgeable and are accepted by people (election or appointment) decide on political matters. All people can participate in shuura if the matter is of public and general concern and it is understandable by an average citizen. Ummah's consensus is not in error if the issues is understood and emotions are not involved. Participation of the whole ummah is in the form of a plebiscite or a well conducted public opinion survey. The Ulama can represent the Ummah in issues of a legal nature. Ulama are subject experts in Law who advise and guide ahl al hill wa al iqd in political decisions. Experts in various scientific, technological, medical, and social disciplines advise ahl al hill wa al iqd and do not make binding decisions on their own. The following principles must be observed in the shura process: justice, 'adalah; objectivity; consideration of space-time factors; adherence to a system of higher values and objectives, balance, and public education. Shura must achieve balance between majority and minority views, between expertise, knowledge, and experience on one hand and public will on the other. Mistakes in shura are

lessened if community is well educated and understands maqasid al sharia. Shura is undertaken on matters for which there is no textual evidence or where the text is not interpretable in a definitive way. Shura covers all matters of religion and the world but the main areas of shurat al jamaat are security, war, and peace; applications of the Law; installation of the imaam; financial policy; oversight of government; and new issues arising, *al mustajiddaat*. Shuura is concerned with policy and not administrative detail.

Practical Application Of Shuura

Shura is not confined to politics and government. It is a social institution and a way of life to be followed in the home, economic activities, scholarship, and social life. Socialization for shura involves training and practice starting from the home. The community must stick to shura even if mistakes occur through following the shura process. Spread of knowledge and education enable all citizens to participate meaningfully in the shura process. The procedure of shuura is not defined in detail to allow flexibility to time-space factors. Generally a shura council should make most decisions. Very crucial and strategic decisions should be decided by plebiscite. The methods of reaching a decision are flexible. The majority view predominates not because of numbers but because it is right. The majority has to convince the minority and not impose on it. Basically the methodology of *usul al fiqh* based on Qur'an, sunnah, qiyas, ijma, and *masalih mursala* is followed.

Ijma: A Form Of Shura

Ijma is a type of *ijtihad* and a form of shuura. Generally ijma is made by representatives with the consent of the rest of the ummah. The consensus may be explicit, *ijma qawli*, or may be implicit, *ijma sukuuti*. *Fiqh*, *ijtihad*, *ulama* and *mujtahidin* must be in institutions independent of government to ensure freedom of thought. These institutions are academic resources that support the elected legislature. The *ulama* can be equally consulted by government and by ordinary people. The *ulama* cannot impose their *ijtihad* on any one. Individuals must be free to choose what opinions to follow.

Maal

Rizq

The Islamic concept of rizq is very different from the western one and explains the major difference between Islamic and western economics. In Islam rizq is expansive. European economic thinking is based on scarcity of resources. Rizq is sustenance from Allah. Allah's rizq is good and is abundant. Allah can give rizq in abundance. He can also contract the rizq. There are differences in the rizq that Allah bestows on different people.

Maal

Maal, mentioned 76 times in the Qur'an, can be maal mubaah or maal haraam. It is a means and not an end. It can be used to do good or to do bad. Maal as exchange in buying and selling to fulfil basic human needs, as compensation for work, a means to political power, and as the basis for the husband's leadership in the family. Maal like life is protected by Law. Collection of maal is a human instinct. Humans are happy with maal and are proud because of it. Some people love maal. Others have renounced maal. Maal is fitnat (temptation) and is a test (ibtillaau). It can keep people too preoccupied and they do not undertake jihad or remembrance of Allah. Economic self-reliance is earning a living by working. Halaal earnings are praised. Haraam earnings are not blessed. Maal is earned by trade, agriculture, manufacture, or providing services. Being rich is having plenty of maal. It is a source of enjoyment. It may arise from working and earning, from donations, and from inheritance. The relationship between amount of maal and feeling rich is complex and involves psychological factors. Some with plenty of maal may feel poor because they aspire for more. Some own very e maal may feel rich because they are satisfied with what they have. There are many forms of maal: money, offspring, tangible and intangible property. All maal is from Allah. Maal may be associated with good attributes such as modesty and generosity. It may also be associated with bad attributes such as miserliness, transgression, kufr, and nifaaq.

Property Rights

Islam asserts the right to private property that is transferable to others by gift, sale, or inheritance. Maal is a trust from Allah. The human is a custodian of maal; the real owner is Allah. The human is just a vicegerent in maal. The needy have a right in a Muslim's property. Maal should not be given to the foolhardy, safiih, who will waste it. Ultimately the only permanent benefit for a human from his or her maal is the thawaab from sadaqat. The Law prescribes sanctity of maal, hurmat al maal. Maal cannot be destroyed. The of a Muslim is protected by Law. Special emphasis is placed on the wealth of the orphan, maal al yatiim.

The Economic System

Allah enjoined humans to exploit the earth. Earning one's livelihood was better than dependency but the community must support those incapable of working. Economic activity within a moral context leads to success on earth and the hereafter, international brotherhood, equity, justice, equal opportunity, social welfare, and economic efficiency. It must fulfil the 5 purposes of the Law (maqasid al sharia) and strengthen jihad capabilities. The haraam is defined leaving the rest as mubaah. The Law allows free markets, the profit incentive, private property, and free enterprise within a moral context and limits of the Law. Fabrication of a utopian economic system and imposing it in the name of Islam is very dangerous. The Law allows people the initiative and creativity to experiment and find the best system for their time and place within the regulations of the Law. The interdependence of the economic systems in the world means that an isolated Islamic economic system is difficult to maintain. However any attempts to establish an Islamic economy, even if not yet perfect, are a step in the right direction and should be encouraged. Two Islamic economic institutions have been successful in our times: Islamic banking and Islamic insurance.

Accumulation Of Wealth And Its Regulation

Humans differ in rizq. Some inequality is needed for motivation and maintenance of a dynamic economy. The law

ensures equity and equality of opportunity but cannot guarantee equality of actual achievements. Excessive accumulation of maal leads to corruption, exploitation, hyperconsumption, and waste. Excessive accumulation of maal by one individual is restricted by limiting economic activity to the halaal goods and services, prohibition of dishonest transactions, encouragement of giving, imposition of zakat, financial support of the family and relatives, and a system of inheritance that distributes the estate of the deceased among several inheritors.

Lifestyle

The Essentials Of Life

The essentials of life are food, water, shelter, security, and clothing. The functions of food are providing body, body growth, and body maintenance in the best condition. Meals together strengthen social relations are are a form of entertainment The Law forbids foods specific foods and drinks that are injurious to good health leaving the rest of foods as mubaah. It is prudent to avoid foods whose status is doubtful. The malnutrition of the rich is over consumption that leads to disease. Malnutrition of the poor is inadequate intake. Allah provides rizq for all living things. There is enough food in the world but its distribution is poor; some have too much while others starve. Food shortage is also caused by war, political instability, social injustice, or economic inefficiency. Humans throughout history have struggled, worked, and even went to war to ensure food security. Water is is necessary for all chemical reactions in body metabolism. It is used for cleaning and temperature regulation. The functions of the house are protection from the weather and aggression, privacy, child-rearing, social interaction, rest and entertainment. Humans need physical security, psychological security, and emotional security. The functions of clothes are protection from the weather, modesty and covering nakedness, beauty, identification for social intercourse, occupational purposes, and

ibadat. The Law enjoins covering the 'awrat but gives a wide latitude on how that can be done. Different dress fashions enable humans derive pleasure from clothes. Dressing for arrogance or for fame is forbidden.

Dress And Ornamentation

Humans unlike animals must cover their nakedness for human dignity and preventing sexual stimulation. The limit of awrat in salat is the standard. The man's awrat is between the navel and the knee. The woman's awrat is her entire body except the face and the hands. Awrat should be covered all the time. Exposure of awrat to others is generally forbidden except for exceptions based on age, gender, social status, fear of temptation, family relations, or occupational needs. Covering of awrat is relaxed for elderly women, for young children unaware of sexuality, for servants working inside the house, and for women in front of other women. The spouse can see the whole awrat. Close relatives (male and female), children, and servants in the house are allowed to see the awrat of a woman except between the navel and the knee. Covering more than the minimum is required of temptation is feared. A handsome man should cover the legs and the upper part of the body. A stunningly beautiful woman should veil her face. Innocent non-repeated or non-purposive looks at non-awrat parts of the body are permitted. What should not be seen should also not be touched. Hijab has great social, religious and political significance. It forces society to look at a woman as an intelligence and competent member and not a beautiful body to be admired. It asserts Islamic identity in the face of European cultural and political invasion of the Muslim world. It saves waste of money on imported cosmetics and dress fashions.

Entertainment, *tarfiih/tarwiih*

The Law forbids immoral and obscene poetry, singing, dancing, and art. Dramatic expositions that are moral and do not violate any provisions of the Law are permitted. Any entertainment that involves ikhtilaat is forbidden. Making pictures and sculptures without necessity is discouraged. Participative sports for purposes of building body strength is

encouraged. Spectator sports is discouraged. Sports is discouraged if it is associated with addiction, commercialization, gambling, and violence. All forms of gambling are forbidden.

Social Failure

The Qur'an describes social failure as *'ajz, wahn, dhull, and kasal*. Failure may be physical, psychological, or social but all are interrelated. Failure manifests as neglect of Allah's duties, social incompetence, lack of seriousness, kufr, misguidance, transgression, temptation, *maghram & ma'atham, hamm & ghamm, jahd al bala & dark al shaqaa*, miserliness, distress and sorrow, helplessness, laziness, cowardice, indebtedness, begging from others, poverty, being overcome by others, vain talk, extravagance, questions on disputed issues, and being hasty. The ultimate form of failure is loss of self-control and ending up being under the control of passions and becoming an addict to a habit or a sin. The causes of failure are: forgetting Allah and neglecting His commands, diseases of the heart, and peer pressure. Social failure is a result of wrong choices of what life-style to follow.

Sexual Perversions

Background To Zina

Non-coital adultery is a type of minor zina committed by the eye, the ear, the tongue, the mouth, the limbs, and the hands. These organs are involved in antecedents to the actual crime of illegal sexual intercourse. The Qur'an severely condemned approaching zina. Antecedents of zina are haram because what leads to haram is also haram. Preventive measures of zina are education, tarbiyyah, early marriage, and following the Law. Zina and its antecedents are avoided by modesty in dress; prohibition of ikhtilaat and *khalwat*, discouraging looking at the opposite sex with desire, privacy of the home, and *huduud* as a final deterrent. False accusation of zina, *qadhif* seem common and thus easier to commit. Pornography is conducive to zina. Social disapproval of zina by the family and the

community is more effective than legal deterrents. *Ghiira* is a strong motivation to make sure that spouses and relatives do not approach zina.

Antecedents Of Zina

The antecedents of zina are trans-sexual dressing and behaviour, *takhannuth/ stirjaal*, free mixing of the 2 genders, *ikhtilat*; seclusion, *khalwat*; *lustful* the gaze; and indecent exposure, *tabarruj*. These either singly or in combination create an atmosphere conducive to committing zina.

Fornication, zina

Zina as a result of consensual understanding involving married or unmarried persons is severely prohibited. It may take the form of prostitution involving exchange of sexual favors in return for monetary or other benefits is prohibited. Forcing women into prostitution is forbidden. Earnings from prostitution are illegal. Adverse effects of zina are sexually transmitted diseases, out of wedlock births and illegitimate children who live in physical and emotional deprivation, family break-down, and high rates of divorce.

Abnormal Sexual Behaviors & Practices

Anal intercourse, *liwaat*, male and male or male and female, is severely prohibited and is punishable by death. Masturbation, *istimnaan*, is sexual self-stimulation by both males and females. It is *makruuh* but allowed if it prevents commission of the bigger crime of zina. The Law prohibits copulation with animals or use of sexual objects and fetishes. The death penalty is prescribed for a male who commits rape, *istikraah*. A woman forced into illegal coitus is not punished. The death penalty is prescribed for incest, *ityaan al mahram*.

Abnormal Marital Arrangements

The law prohibits abnormal marital arrangements that lead to illegal sexual intercourse. These include temporary marriage, *mut'at*; marriage with intention to divorce; *nikaah al shighaar* (males exchange female relatives in marriage without paying mahr), and legally invalid marriage, *nikaah baatil*.

Addictions

Definition Of The Addiction Problem

Addiction can be to alcohol, tobacco, or psycho-active substances. It may also be addiction to habits, passions, and sins such as sex, sports, fame, food, or gambling. Other forms of addiction are to power, respect, and money.

Dependence And Addiction

Drug dependence is of two types: physical dependence and psychological dependence. Addiction is inability to control use of a drug or enslavement to a habit (good or bad) through loss of self-control. Some forms of addiction are innately bad such as addiction to nicotine, addiction to drugs (alcohol, opiates, sedatives, marihuana, amphetamine, cocaine, caffeine), addiction to gambling, and addiction to *lahw*. Some forms of addiction start as habits and practices that are good innately but become bad due to excesses. This includes sports and *halaal* food. The addiction process goes through various stages. It starts as a habit that becomes psychological dependence. It finally ends up as physiological dependence. Addiction has severe consequences. Addiction to intoxicants is prohibited because it nullifies the purpose of preserving intellect. It leads to poor health, psychiatric complications, crime, and violation of *diin*.

Rulings About Khamr

Khamr is defined in the Law as any substance that causes intoxication. Alcohol, tobacco, and other psychoactive drugs are not food but are *khamr* because they change or impair the mind. With an impaired mind and loss of control a human becomes an animal. Any thing that causes clouding of the mind is called *khamr*. Every intoxicant is prohibited. What intoxicates in large amounts is haram in small amounts. The term alcohol refers to one type of *khamr*. *Khamr* is the key to sins and evils. Taking *khamr* is likened to worshipping idols. The recompense of a drinker of *khamr* is jahannam. *Iman* temporarily disappears from a person at the moment of taking *khamr*. The *salat* of a user of *khamr* is not accepted. *Khamr* is

not a cure but is a disease. Wide-spread drinking *khamr* is an indicator of the coming of the Last Day. *Khamr* has harms and benefits. The harms are predominant. The benefits are few and temporary. The harm of *khamr* lies in its effects on health and its associated sins. Prohibition of *khamr* was gradual being carried out in 3 stages. Some people call *khamr* by another name in order to make it *halaal*. The Law has several measures to control addiction to *khamr*. Manufacture, sale, and distribution of *khamr* are prohibited. Raw materials for making *khamr* should not be sold to a potential manufacturer.

Non-Alcoholic Drug Addiction

Nicotine addiction is a type of drug addiction. Addiction to narcotics & sedatives starts as normal pharmacological use of the drugs and progresses to harmful addiction. Illicit drugs with no pharmacological benefit are addictive

Prevention And Treatment Of Drug Abuse

The root cause of addiction is following passions, *ittiba'u al hawa*. Measures should be taken to stop antecedents to addiction on the basis that what is *haram* is *haram*. While preventing addiction we should not forget to treat the victims of addiction. Internal measures of addiction control are strengthening *iman*, *taqwa*, *ibadat*, and *dihkr*. External measures of addiction control include education, *tarbiyat*, good use of spare time, and good company. Rehabilitation of addicts starts with telling them to repent. If they refuse they should be isolated socially. Cognitive therapy is used to sure the addict understands the impact of addiction on health, wealth, and family life.

Poverty

Nature And Causes Of Poverty

The Qur'an refers to poverty as *faqr*, *masknat*, and *'imlaaq*. *Shaitan* uses human fear of poverty to frighten and control people. Poverty can be a form of punishment. Poverty has its own merit. The majority of the inhabitants of *jannat* will be the poor. The main causes of poverty are family breakdown, non-payment of *zakat*, social injustice, and physical disasters.

Effects Of Poverty

Poverty is associated with malnutrition and ill-health. It destroys human dignity and self-worth replacing them with despair and loss of hope. Poverty undermines self-confidence and assertiveness making it difficult to resist temptation to sin and crime. People may resort to crime to meet basic human needs. Social instability results when the deprived fight the well to do.

Poverty Mitigation By Social Welfare, *takaful ijtimae*:

The Qur'an has taught many ways of mitigating or eradicating poverty. The target groups for poverty programs are the weak and needy: the *maskiin*, the *faqir*, orphans, widows, and the elderly. Their needs are food, shelter, clothing, medical care, and education. The main sources of resources are *zakat al mal*, *zakat al fitr*, and *sadaqat al tatawu'u*, *kaffarat*, *adhahi*, *'aqiiqah*, and *waqf*. The institutions involved in social welfare are the extended family, waqf institutions, the government, and social insurance.

Eradication Of Poverty

Equitable distribution of the world resources will eliminate much of the poverty existing at the moment. However concerted international action is not possible. The primary role of the government is to ensure just economic distribution, employment opportunities, infra-structure, and a non-riba economy. Conditions of peace and stability will enable the community build safety nets for the most vulnerable citizens. Stability and continuity of the nuclear family protects children from poverty. Open migration will enable people to move from places with no economic opportunities to others where they can help themselves.

Misuse Of Wealth, *taraf*

Taraf, waste of food, and a hedonistic lifestyle waste resources that could have been used to help the poor.

Violence

Taking Life

Taking one's life is a major sin that takes a person to hell and away from jannat. Salat al janazat is not offered for a suicide victim. Any form of harm to others is forbidden. This may be spilling blood or other forms of physical harm such as beating. Killing a human without valid reason is forbidden. The Qur'an condemned the killing of prophets by the Jews. Homicide is a major sin being among the 7 worst sins. The reward of deliberate killing of a believer is hell. Genocide is wholesale killing of people because of race or other distinguishing characteristic for example the genocide of Banu Israil in Egypt. Human torture is common. Opponents or those with different ideas are often victims of torture. Even criminals may be tortured beyond the the legal punishment. The Qur'an condemned the killing of believers at the trenches. Humans throughout their history have displayed levels of purposeless cruelty to one another that is not found among animals. The weak in the society have often been victims of this cruelty.

Abuse Of Women

We learn from books of siirat about the poor status of women on pre-Islamic Arabia. This included denial of the right to life for the women in the pre-Islamic period, denial of the good things of life from the woman, despise of the woman in the pre-Islamic period, considering a woman as a bad omen, inheriting the woman like a piece of property, and sadness at the birth of a girl. The fate of the Quraishi women was worse than that of Ansari women. The woman was also mistreated in pharaonin Egypt. The low and despised position of women exposed them to violence at home and outside the home. Islam protected the rights of the woman. It raised the woman's status. It acknowledged the physical weakness of mothers necessitating special protection for them. Killing the woman was forbidden. Good treatment of women was ordained. Making fun of women was prohibited. Abuse of women can be physical, psychological, sexual, or emotional. Domestic

violence is defined as physical violence, coercion, threats, intimidation, isolation, emotional abuse, sexual abuse, economic abuse. Victims of domestic violence can get protection. Violation of the protection order is a crime.

Violence To Children

Any action that kills or causes harm of any kind to the fetus in utero is forbidden by the Law. Ancient and modern societies have practiced infanticide for various reasons. The pre-Islamic Arabs killed their children for fear of poverty. The Pharaohs killed male infants among the children of Israel. Islam ordained good treatment of girls. Justice in giving among children was ordained such that some do not feel less loved and desired. Children are victims of neglect, poor care, beating and torture. Various forms of child sexual abuse are practised: child prostitution, under-age marriages etc. Child abuse: The state is a protector of children and it can intervene to provide care if parents neglect their duty. Obligatory vaccination is in the public interest and overrides individual freedoms and choice. Children are often victims of abuse, physical and psychological. The battered child syndrome is one of the manifestations of child abuse. The physician is liable for neglecting to report child abuse.

Abuse Of The Elderly

Old age is a period of physical weakness. Islam ordained respecting the rights of the elderly. Good treatment of parents is one of the best acts in front of Allah and has special rewards. If every offspring treated the parents well, there would be no elderly mistreated in the world. Cursing or mistreating parents is one of the major sins and is accompanied by severe punishment. It is rare for a person to curse their own parents; they may however curse parents of others who retaliate by cursing their parents. Allah answers the prayer, dua, of a parent against a child. Geriatric patients or elders can be mistreated by abuse, neglect, or exploitation either at home or in institutions. Elders because of dementia cannot give consent for research and a proxy has to be used. Brain injured patient can be abused.

Other Forms Of Violence

Fire should not be left alight when sleeping. Illegal wars cause a lot of death and suffering. Even in legal wars, no harm is done to non-combatants. Armed robbery causes harm. Some sports are very aggressive physically for example boxing and wrestling. Some sports are very risky like climbing, gliding, and skiing. Occupations may expose workers to harmful situations. Litigation in the occupational setting may arise due to failure to enforce OSHA standards, failure to keep the workers informed, access to employee records, discrimination in the work-place (gender, pregnancy, fetal protection), workers' compensation, and legal liability of occupational exposure.

Da'awa

Nature Of Islamic Dawaa

Dawaa is conveying the message of Islam to Muslims and non-Muslims. It is a communication process involving the caller, the called, the message, and behavioural change. Tauhid is the basis for all dawaa efforts. The Qur'an is the main tool of dawaa. Dawaa indicates dynamism of the community because Islam is a missionary religion. Dawaa is a collective obligation, fardh kifayat, however individual efforts even if small are encouraged. Dawaa must be undertaken at all places and times. The first level of dawaa is calling to accept the creed accomplished by pronouncing the *kalima*. The second level is calling upon individuals and families to practice and live Islam. The third level is calling upon the whole society to be organized according to the teachings of Islam. Dawaa has impact on the caller, the called, and the society at large.

The Caller

The caller gets the reward for calling people to guidance. The prophet Muhammad is the best model of a caller. His message is universal and clear. His behavior, patience, humility, and mercy were effective. He faced problems. The caller must have

the following personality characteristics: patience, wisdom, insight, *iman*, *'Ilm*, kindness, consideration, firmness, commitment, good personal relations, generosity, practicality, flexibility, humility, *zuhd*, *qana'a*, and *taqwa*. The most important attribute is commitment, *ikhlaas*. The following characteristics make a caller more persuasive: being perceived as honest, personal power, attractiveness, likableness, similarity to the called, being of the same gender as the called, expertise, and credibility. A caller need not be perfect to start dawa. Dawa makes him better because of the challenge is that you have to live up to expectations of a caller. All dawa workers whether full-time or part-time must receive training tailored to the local situation.

The Called

Everybody is targeted, Muslims and non-Muslims, all races and nationalities, all social classes, and all parts of the world. Dawa to Muslims involves calling them to practice Islam. Dawa to non-Muslims exposes the truth and positives of Islam while correcting the disinformation by the enemies. It aims at returning them to the natural state of human beings, which is Islam. Dawa to the general society involves propagating to the general public with the aim of making them aware or conscious of the presence of Islam. Dawa programs could target special populations such as women, youths, patients in hospitals, prisoners, students, laborers, and workers. They could also target special social classes such as artists and stars, aristocrats, middle class, professionals, and ordinary people. The marginalised and rejected members or classes of society are a special target group for dawa because they are so susceptible. These include: criminals in prisons, drug addicts, the socially deprived, etc. They are looking for an alternative that will take them out of their sad situation.

Strategies And Methods

Aggressive and pro-active strategies are better than defensive and reactive ones. Success depends on phasing, gradualism, *tarbiyah*, and influence by example. Material incentives should

not be used to convince but to attract people to listen to the message. *Dawa* requires a wise, polite, non-antagonist, non-critical approach presentation of the Islamic alternative because truth automatically displaces falsehood. *Dawa* may be by direct or indirect, personal or impersonal. Personal contact is the most effective approach. The message should be individualized and customized. It should be simple and direct.

Planning, Execution, And Evaluation

The main elements that a *dawa* plan covers are: the caller, the called, the time dimension, resources (money, material), and program control. *Dawa* requires funding but cannot be professionalized. Volunteers do the legwork and have motivation and enthusiasm. Coordination eliminates unnecessary duplication and competition. Individual initiative and many organizations are encouraged. The main objective is unity of purpose and not unity of organization. Program evaluation is used to improve effectiveness. Process evaluation is easy. Outcome evaluation is difficult because results of *dawa* are long-term and are not quantifiable. Success depends on Allah's will and not only the efforts of the caller. Opposition should never provoke violent reactions. *Dawa* is a peaceful process that targets the hearts of men and not their bodies.

Enjoining Good And Forbidding The Bad, *amre & nahy* Obligation

Amr and *nahy* are necessary for the maintenance of morality and social order. *Amr* and *nahy* are communal obligations. The prophet said that whoever sees an evil should change it by the hand, if he cannot by the tongue if he cannot by the heart and that is the weakest of *iman*. *Amre* and *nahy* by the hand and the tongue are *fardh kifaayat*. *Amre* and *nahy* by the heart is *fardh 'ain*. *Amr* and *nahy* have 2 components, promotive and inhibitive, that must be balanced. The promotive component is enjoining the good and the inhibitive component is forbidding the bad. The good, *al ma'aruf*, must be in actions, in speech, and in fulfilling obligations. *Dawa* and advice, *nasiihat*, are a form of *amr* and *nahy*.

Consequences Of Amr & Nahy

Amr and nahy protect society from destruction due to actions of evil doers. There is a great reward for those who guide to the good. The ummat's superiority based on undertaking amr and nahy. Neglecting amr and nahy is a reason for punishment. Banu israil were cursed for abandoning amr and nahy. There is no imam for one who does not attempt amr and nahy. The prophet gave the example of those who neglect amr and nahy like passengers on a boat in which people sitting at the upper level neglected to stop those on the lower level from making a hole in the boat which eventually caused the boat to capsize and drown everybody

Halal And Haram

The person must know what is halal and what is haram. Halal is done while haram is avoided. Halal and haram are clear but between them are mutashabihaat. The general guideline about shubuhaat is to leave alone what causes doubt and do only what has no doubt in it keeping away from grey areas. People unfortunately use the gray area as an excuse to permit the forbidden. Allah wants that people make use of relaxations that He gave them as much as He hates commission of ma'asiyat. A person is advised to leave what causes him doubt and go for certainty. Allah does not oblige a human beyond capacity. Once a community neglects *amr* and *nahy* there is social disorder. Scales and values are reversed. The good may be forbidden. It is forbidden to permit the forbidden as it is equally forbidden to prohibit the permitted.

Methodology Of Amr And Nahy

Any one can undertake amr & nahy on the specific subject that they know well. The person need not morally perfect; what is needed is that he is trying to get better. *Amr* and *nahy* is *fard kifayah*. Those who undertake it must be adults, believers, and must have the ability needed for the task. They must have the attributes of knowledge, *taqwa*, and good behavior/character.

There are several targets of amr and nahy. Some know the truth but reject it out of jealousy like the Yahuud. Some know the

truth and turn away from it for material reasons like the wealthy. Some do not know the truth because of ignorance and may even be enemies of the truth. *Nahy* is about specific bad actions that are forbidden by *shariat*, that exist now, that are obvious, that are known without *ijtihad*, and any blameworthy, *munkar*, or forbidden, *haram*, act. *Amr & nahy* are undertaken at all times of day and night. In some special circumstance, it may be better to wait for a more appropriate time to make sure that the target of *amr* and *nahy* will appreciate the message better. *Amr* and *nahy* are undertaken in any place. The method of *amr* and *nahy* proceeds by knowing the *munkar*, explaining that it is wrong, and *nahy* verbally by giving advice. If there is no response harsh condemnation is undertaken. If there is no change physical means of removing the evil are undertaken. Courage is needed. There should be no fear in saying the truth. There must be consistency between word and deed. A person cannot order good and perform evil. Balance is needed between *amr* and *nahy*. *Amr* and *nahy* must be realistic being fulfilled to the extent of ability. The channels of communication used in *amr* and *nahy* are speech, lectures, books, preaching, *nasiihat*, and pamphlets. Kindness and sympathy are needed.

Innovations

In matters of *aqidat* and *ibadat* there can be nothing new because all was prescribed in the book and nothing was left out. Even apparently innocent innovations in matters of *aqidat* are dangerous because they divert attention from the spirit of true *ibadat* and become just rituals.

Social Change, *taghyir ijtimai*

The Original Position Is Success

The original default position is success and happiness. Transgressions lead to fall and destruction. If communities believe and have *taqwa* they get bounties from Allah. Bounties are a test for humans (2:49 & 89:15). Bounties are increased if humans are grateful to Allah (4:147 & 14:8). Few humans are grateful (2:243 & 67:23). Humans give the lie to Allah's

bounties (55:13). Iman is necessary for happiness on earth (13:28).

Change Is For The Worse

The Qur'an has talked about change from good to worse as destruction of people (6:6 & 77:16), communities (6:42 & 50:36) as punishments for transgression (7:159 & 35:42).

Laws Of Social Change, *sunnat al taghyir*

The Qur'an has described that there are laws of social change, *sunnat al llaahi fi al taghyir* (6:89 & 47:38). The same laws applied to all past communities (3:137 & 48:23). Allah does not change the original position of a community unless and until they themselves do evils that necessitate that change (8:53 & 13:11). Every community has a fixed span of time (7:34 & 23:43). Communities rise and fall and are replaced by others (6:133 & 76:28).

Causes Of Adverse Social Change

Social change leading to decay is due to ruling with laws not from Allah, *hukm bi ghayr ma anzala al llaah* (2:188 & 24:48), following the false, *tab'iyat madhmuumat* (2:102 & 71:21), luxuries, *taraf* (11:116 & 43:23), disbelief, *kufir* (6:25-26 & 19:74), giving the lie to the truth, *takdhiib al haqq* (8:54 & 69:4-6), transgression, *dhulm* (3:117 & 53:50-52), crime, *ijraam* (7:83-84 & 44:37), the actions of the ignorant, *sufaha* (7:155), following desires, *ittiba'u al hawaa* (20:16), sins, *dhunuub* (6:6, 8:54, & 17:17), *fisq* (17:16 & 46:25), *dhann al suu* (41:23), wasteful extravagance, *israaf* (20:127-128, 21:9), *taraf* (17:16), *batr* (28:58), and *batsh* (43:8, 50:36).

Concept Of Reform, *islah*

The Qur'an has mentioned reform, *islah* (2:160 & 47:5). It is essentially the honorable, *taba'iyat mahmuudat* (2:38 & 57:27). The believers will eventually be victorious, *nasr al muminuun* (2:194-195 & 63:8). The earth will be inherited by the righteous, *wirathat al ardh li al saalihiin* (7:100 & 44:28).

Professional & Occupational Organizations

Academic Associations

Academic associations are usually established for three purposes: Intellectual exchange, assertion of rights, and setting or maintaining Professional ethics/standards. They achieve these purposes through various activities which are *inter alia*: seminars, publications, training, certification, and professional discipline. Membership is based on academic qualifications and professional involvement. Grades of membership may reflect respective professional standing. These organizations value their academic independence and self control which they feel are necessary for professional integrity. The word 'alim is generally used to refer to scholars in the classical Islamic sciences. The term can be extended to all sincere and believing scholars of other disciplines. Ulama organizations must have the following objectives: dawa, protect Islam and its heritage, application of Islam, Islamization, advice, and counseling. Membership qualifications may be informal because many Muslim scholars today were not trained in any formal institutions of higher learning. Some hold academic qualifications from universities or other institutions. In addition to the academic standing, the member must have Islamic character and values.

Student Organizations

Student extracurricular activities should never interfere with studies. Students have to be good students first before they are anything else. Programs for students on the campus: worship, tarbiyat and training, academic support, entertainment, career or study counseling, counseling on social life, protection of Muslim student interests, and dawa. MSA should receive and initiate new students on arrival or if possible even before coming to the University or college. Routine activities of MSA include: lectures, question forums, study groups, competitions, projects, drama, exhibitions, visits to hospitals, charitable visits, Islamic newsletter/magazine, video shows, practical demonstrations. The usra type of training is the best for students. A specific plan must be followed to ensure that there

is continuous and balanced *tarbiyat* all through the course of study at the university.

Labor And Professional Unions

A labor or professional union is a social institution that should concern itself with larger issues of controlling inflation, stabilizing prices, expansion of the economy to provide full employment. The union should also take positions on issues of local and global economy. It should eschew the European concept of continuous social struggle and conflict between interest groups: employers vs workers, professionals vs clients, government vs unions etc. This contradicts the Islamic model of social development that requires consensus-building at all stages within the context of Islamic teachings. Islam equally rejects the Marxist doctrine of class struggle. The idea of labor being a permanent class of society in continuous struggle with owners should be replaced by a system whereby workers are encouraged to avoid hyper consumerism so that they may save enough money and buy property and shares and thus gradually join the owners' class. If working class is thus temporary why the social struggle? The union should promote cooperation between owners and workers in *al birt* and *taqwah* instead of competition and struggle.

Social Welfare And Disaster Relief Organizations

Social Welfare Organizations

Poverty is defined in absolute and relative terms and its level varies from place to place. Individual poverty is due to lack of saleable skills, lack of knowledge, lack of opportunities, and misfortunes due to failed economy or discrimination. The blind, the aged, the mentally and the physically handicapped are incapable of working. Eradication of poverty can be alleviative or curative. The alleviation is providing assistance. Cure is by job creation, job training/apprenticeship, education, job search/match, and assuring a minimum wage. Poverty is prevented by compulsory saving, strengthening the family, crisis intervention, ensuring employment, job training, and inculcating a work ethic. Mutual help in society, *takaful al ijtima'e*, is by charity and *zakat al maal*. Charity should be temporary while poverty curative measures are undertaken.

Social network are needed to guarantee basic necessities to all people. The social safety net includes the extended family, community organizations, and the government. Voluntary work assists the elderly, the handicapped, and the mentally ill. The social welfare institutions involved in social work are: hospitals and clinics, schools, orphanages, homes for the elderly and the handicapped. The role of government in social welfare should be limited to regulation, monitoring, or funding. Social welfare work should be in the hands of private societal organizations. Several social interventions can eradicate poverty such as nasiihat for sinners and negligent parents, lifestyle changes, control of drug abuse, and supporting the family to survive.

Disaster Relief Organizations

A crisis or a disaster situation is said to exist when the magnitude of the problem or its speed of evolution and progression overwhelm the usual coping mechanisms. Characteristics of a disaster are immediate danger to life, unstable and unpredictable situation, events happening quickly, emotions high, and no routine or standard responses. **Man-made disasters** are those in which humans are involved directly in the causation such as: war/violence, economic disruption, political instability, and social crisis. **Non man-made disasters** are disasters that happen without any direct involvement of humans such as epidemic disease, drought, crop failure, famine, hurricanes, typhoons, flooding, and earthquakes. Managing a disaster requires a full assessment of its human, geographical, social / psychological, financial / resources, and technological dimensions Disasters can be anticipated and prevented. The aim of crisis management is to reverse the situation back to normal or limit the damage done. Crisis management requires speed in information gathering, deciding, and implementing. Because of the rapid change in status quo, decisions must be updated continuously. Systematic disaster management involves assessing the situation, assessing potential development, assessing side effects, determining who can be involved, stopping actions that make the situation worse, deciding the strategy and alternative strategies, continuous review and assessment, and avoiding panicking.

The following processes should go on continuously during disaster management: assessing, planning, implementing, and evaluation. Tracking progress of a crisis must be timely and accurate. Prioritizing and decision-making are undertaken under pressure of time. Decisions are made on less than full information more often than in normal situations. Intuition based on previous experience plays a more prominent role. Routines are very good for dealing with crises. There must be a recognized leader. Speed of response is very important in a rapidly developing crisis situation. Quick intervention at the right time can limit the damage. A few crises can become chronic problems if the causative agent continues operating unchecked or if the primary cause leads to secondary crises that become chronic and are not checked. Most crises are self-limiting and are time-limited. Speed of response is very important to limit the damage. Late intervention serves no purpose because the damage is already done and the crisis may be over.

In an emergency you may not have the luxury of using the ideal approach. Speed is important and we may have to use less than ideal quick and dirty solutions. As far as possible you must avoid creating future problems in our haste to resolve a current crisis. Charismatic leaders usually emerge at times of crisis. They are usually very effective in crisis management. Each disaster is unique. There are no fixed rules that can cover management of all disasters. There are however some general principles. Many crises may have to be waited out. Time is the ultimate solution. Epidemics of infectious diseases are self-limiting in time if spread of the contagion can be controlled. Preventing movement into and out of the stricken region is a first preliminary measure. Spread of the infection to the healthy can be prevented by appropriate measures of vaccination and other precautions against infection. Interventions in a crisis situation are always associated with some risk. The intervention may inadvertently cause more damage. It may not achieve its goal or it may close off other more viable options. Having a fallback plan minimizes the risk

The Creed

'*Aqidat*

- *Islam, Iman, & Ihsan*
- *Tauhid*
- *Risalat*
- *Aakhirat*
- *Qadar*
- *Kufr & Shikr*

Islam, Iman, & Ihsan

Fundamentals Of The Diin

The three fundamentals of ddiin, *usul al ddiin*, are: *Islam*, *Iman*, and *Ihsan*. These three concepts taken together constitute the creed of Islam, *al aqidat al Islamiyyat*. There is a gradation. *Islam* is the beginning. *Iman* is a higher level. *Ihsan* is the highest level. *Islam* is outward manifestation, *dhaahir*. *Iman* is in the heart, *baatin*. *Ihsan* applies to both *Islam* and *iman*. Every *muhsin* is a *mu umin*. Every *mu umin* is a Muslim. Not every *mu umin* is a *muhsin*. Not every Muslim is a *mu umin*. *Iman* is a higher level of spiritual progress than *Islam*. *Islam* is a pre-requisite for *iman*. You can not have *iman* without having *Islam*. It is however possible to be a Muslim who has not yet attained the level of a *mu'umin*. *Iman* is knowledge, '*ilm*'; testament, *qawl*; and action, '*amal*. It is acceptance in the heart, *tasdiq bi al qalb*; affirmation by the tongue, *iqraar bi al lisaan*; and work performance by the body, '*amal bi al jawarih*. *Ihsan* is excellence and is the highest level of *din*. *Ihsan* was defined in the *sunnat* as perfection of action. It represents perfection in both *Islam* and *Iman*. It is excellence in worship, work, and in any social action. It is worship of Allah in the full knowledge that He is seeing you even if you cannot see Him. No activity goes by without being observed by Allah. The concept of excellence extends from prescribed acts of *ibadat* to all human endeavors and activities.

Basic Characteristics Of Islam

Islam is built on 5 pillars: *shahadat*, *salat*, *zakat*, *saum Ramadhan*, and *haji*. Islam is oral testament, belief, performance of righteous acts, and following the straight path. A person becomes a Muslim by testifying that there is only one creator and that Muhammad is His messenger. Carrying out the four prescribed duties of worship mentioned above is a practical manifestation of the 2 testaments. A person does not cease to be a Muslim because of a sin as long he does not dispute that his action is a sin. A sinner remains a Muslim but of weak faith. Faith is removed from him for the duration of committing the sin.

Those who commit major sins will be punished in hell for a time and will be forgiven to go to paradise because Allah forgives everything except polytheism. Islam is comprehensive, unitary, indivisible, action-orientation, easy to practice, universal, and is final message. It is rational and understandable. It establishes freedom of belief and freedom of thought. It is societal, reformist, and revivalistic. It is a ddiin of equilibrium, balance, and moderation between divinity & humanity, spirituality & materialism, revelation & intellect, the afterlife & the earthly, individualism & communalism, ideal & reality, past & future, responsibility & freedom, following & innovation, duties & rights, stability & change, knowledge & belief, right & might, *'aqiidat* & action, *ddiin* & state, control by faith & control by authority, material innovations & moral ascendancy, military power & morale.

The Social Culture Of Islam

Imaam al Nawawi listed 23 hadiths that he called madaar al Islam because they define the social culture of Islam. They can be considered under groups: *aqidat*, personal conduct, and social intercourse. The fundamentals of the ddiin, *usul al ddiin*, are Islam, *iman*, and *ihsan*. A Muslim rejects Innovation in religion, upholds certainty, rejects doubt, believes in qadar, relies on Allah, and repents from sins. Muslim personal conduct is characterized by purity of intention, good conduct,

modesty, following the right path, observing rules of halaal and haram, renouncing materialism, consulting his conscience, quality work performance, starting with the most important work, and fulfilling the 5 pillars of Islam. In dealing with others the Muslim leaves alone what does not concern him, loves good for the others, hurts nobody, sincere advice for others, calling to Islam, honoring the neighbor and the guest, suppressing anger, and respecting the sanctity of human life. Misunderstanding of Islam arises due to deliberate distortion by enemies of Muslims or by misbehavior by Muslims ignorant of their religion.

Iman

Iman has 6 pillars: belief in Allah, belief in angels, as creations from light for the purpose of executing Allah's commands; belief in the revelations, the major ones being the Qur'an, Injil, Zabuur, and Taurat; belief in messengers, from Adam to Muhammad (PBUH); belief in the last day, al iman bi yawm al qiyamat; and belief in *qadar*, and accepting Allah's judgment whether perceived as favorable or unfavorable in the full belief that all is from Allah while at the same time basing human action on empirical evidence. *Iman* has many types and manifestations. There are over 72 types of iman. The highest grade of iman is the testament of *la ilaaha illa al laah* and the lowest is removing an annoyance from a public road. Modesty is part of iman. Iman can be weak or strong. The prophet explained the characteristics of the weakest iman. Even the smallest amount of iman protects from hell-fire. Work is part of iman. Iman can increase or decrease according to whether the person is performing good or bad acts. Iman increases with performance of good work. It decreases with performance of bad work. Iman disappears completely for the duration of the period that a major sin like theft or adultery is being committed. It returns as soon as the sin is stopped. There are clear differences between iman and Islam. Iman manifests through practical actions because Islam is a practical religion that has to be lived in society. It is not in any way a

metaphysical or esoteric experience. Iman manifests as good deeds, and worship of the creator.

It also includes, *inter alia*, living in harmony with other humans as well as with the social and physical environment. *Iman* is an inner motivator of externally visible human action and behavior. True believers acquire some recognizable traits and characteristics described by the Qur'an. Iman is associated with excellence in many areas. It is associated with good performance. The believers are tested. Iman has many advantages for the human: honor, brotherhood, firmness, *jihad*; success, victory, rewards, light. Iman is associated with happiness because a believer knows himself, his position, his relation with the creator, his relation with the other humans and his relation with the physical environment. He can also situate himself in the time dimension; he knows where he came from and where he is going. This sense of firmness removes the normal tensions of uncertainty and anxiety that humans experience and leave the believer a happy and contented person.

Ihsan Is The Culture Of Islam

Islam requires quality work and excellent performance. Allah accepts and rewards the best of work. He loves quality everything so Muslims must perfect their work. Humans in their earthly life are tested to see who performs the best. The Qur'an and sunnat have emphasized quality, *ihsan*, and quality performers, *muhsinuun*.

Tauhid

Tauhid Al Ddhhaat, Tauhid al Asmau & Tauhid al sifat

The essence of Allah is one. As humans we cannot reach or understand the essence of Allah. We can only deal with the names and attributes. Part of the creed is belief in the names and attributes of God. They testify to and help humans understand the power and majesty of the creator. Denial of any one name or attribute nullifies *iman*. All the 99 names of Allah are mentioned in the Qur'an. Allah has several attributes,

sifaat, mentioned in the Qur'an. Like names, the *sifaat* help the human understand the majesty of Allah. A Muslim must believe in all the *sifaat*. This includes testifying that they are Allah's attributes and His alone. The human should however not delve into the details of the mechanisms, *kaifa*, because those are above human intellect and understanding. The *sifaat* can be anatomical features, actions or functions, or potential for action, or states of being. The names of Allah are to be used for Him and Him alone. Humans cannot attribute any of the names to themselves. This includes prophets and the righteous. The *sifaat* are for Allah alone and no human or any other creation can have the same attributes. It is a crime to think that Allah's attributes are similar to human attributes. It is also a crime to deny them.

Tauhid Al Rububiyyat

The concept of *rubuubiyyat* is the assertion that there is a creator and sustainer for the universe and all its contents. The creator cannot be created and has neither beginning nor end. The concept of auto-creation, existence without a creator, is untenable because it leads to the logical absurdity of an object 'existing' before it existed. Belief in the one-ness of the creator-God, *tauhid al rubuubiyyat*, is inborn. Any normal human being will innately and instinctively know that there is one creator for the universe. *Tauhid al rubuubiyyat* is a logical imperative. It is impossible for the harmonious and well-coordinated universe to have more than one creator. No two creators could agree so perfectly without any contradictions. *Tauhid al rubuubiyyat* also explains the harmonious interactions in the eco system, the food chains and the food webs.

Tauhid Al Uluhiyyat

Tauhid al uluhiyyat implies worship of one God alone. Nothing else can be associated with Him in worship. The purpose of the creation of the universe is worship of God that is an expression of gratitude to the creator. All creations involuntarily worship God; it is only humans who sometimes disobey because they were given free will that is misused. *Kufr*, denial of God, is ungratefulness. *Shirk*, associating God

with anything else in worship, is an unforgivable sin. *Shirk* is the cause of religious and social anarchy.

'Aqidat Al Tauhid & The Islamic World-View, Tasawwur Islami

Tauhid is oneness of the creator-God that implies oneness of the created universe. The testament of *tauhid* is 'there is no god but one God, *la ilaha illa al laahu*, consists of a negation followed by an affirmation. *Tauhid* encapsulates the Islamic world-view and is the basis of Islamic culture and civilization. *Tauhid* is an intellectual challenge since the concept of one God above and beyond human and the whole universe is an intellectual and abstract reality that can be only grasped at the highest levels of intellectual competence. *Tauhid* provides an integrating framework for the whole universe in whose absence there would be irreconcilable contradictions. *Tauhid* is the basis for physical and social laws that govern science, technology and society. The perfection, order, and harmony of the universe and the human body are an empirical proof for oneness of the creator. *Tauhid*, as belief in one creator and sustainer gives purpose and a sense of direction to human civilization. Belief in *tauhid* guarantees eventual entry into paradise with a short stay in hell as punishment for un-forgiven major sins.

Implications Of Tauhid In Daily Life

Tauhid has implications for our daily life based on issuing from one creator: brotherhood and equality, physical laws of science and technology, social laws, economic organization, and political organization.

Risaalat

Basic Elements Of The Process Of Revelation

Revelation has three essential components: angels, messengers, and the scriptures. Allah sent messages to humans as revelation, *wahy*. These revelations were conveyed from the

heavens by angels to human messengers who are prophets chosen by Allah.

Angels

Belief in the revelation necessitates belief in the existence of the angels who conveyed that message. Angels undertake the following functions: carrying the throne of Allah, being sent on missions, conveying revelations; taking away the souls of the dying, recording human actions and behavior, intervention in some human actions at Allah's command, executing Allah's orders on punishing humans, working in *jannat*, putting disbelievers into *jahannam*, guarding *jahannam*, protecting humans, helping believers to victory, seeking forgiveness for humans, and intercession.

Messengers

Prophets are of two types: those with messages, *nabi rusul*, and those without messages, *nabi*. Twenty-five of the messengers are special: Adam, Idris, Nuh, Hud, Salih, Lut, Ibrahim, Ismail, Ishaq, Yaqub, Shuaib, Harun, Musa, Daud, Sulaiman, Ayub, Dhu al Kifli, Yunus, Ilyas, al Yas'a, Zakariyah, Yahya, Isa, and Muhammad. The first messenger was Nuh and the last was Muhammad. The religion of all the messengers is the same in essence and is Islam. A Muslim must believe in all messengers without any distinctions or discrimination. All messengers were human. It is against the Islamic creed to attribute any divine attribute to any prophet. Some messengers had physical miracles as proof that they were from Allah. Muhammad (PBUH)'s major miracle is the Qur'an which is an everlasting intellectual miracle. The main function of messengers was to convey messages. Muslims believe in the concept of finality of prophethood, *khatm al nubuwat*. Muhammad is the last of the prophets and messengers. Islam is therefore the final religion and the Qur'an is the final revelation.

Revealed Books

Revealed books are an authority and tell the truth. The books are the *injl* revealed to Isa, the *taurat* revealed to Musa, the

suhr of Ibrahim, the *zabuur* revealed to Daud, and the Qur'an revealed to Muhammad. The Qur'an contains all the previous books. A Muslim must believe in the past revelations by believing in the Qur'an because they are all embraced within the Qur'an. Rejection of any part of the Qur'an is *kufr*. It is enough to believe in the Qur'an; it must be put into practice. Muslims are obliged to remember the Qur'an, contemplate its meanings, and convey its message to others. The Qur'an was first revealed on the night of power. It was revealed in bits and pieces over a period of 23 years. The prophet used to dictate the Qur'an to his companions to put each verse in the right *surat*.

The Qur'an, being the last revelation, was scrupulously protected from any distortions. It was written down during the era of the prophet on various writing materials. Thousands of Muslims learn the Qur'an by heart in so many countries that it is impossible for it to be distorted or to disappear. The Qur'an has several names and attributes. The Qur'an is the word of Allah. It is a miracle. Muslims are obliged to read the Qur'an. The Qur'an clarifies *'aqidat*, is a spiritual guide, a source of Law, a source of information about past and future events, a basis for ummatic unity and helps resolve differences. Belief that the *sunnat* of the prophet is valid revelation is part of belief in the Qur'an. The *sunnat* is an extension and interpretation of the Qur'an.

Sahabat and Salihiiin

Sahabat or companions are defined as those who met the prophet and believed in him during his lifetime. They were just and truthful. We remember the good acts of the *sahabat*, talk only good of them, love all of them, and pray for them. Insulting, cursing, or despising any of the *sahabat* is forbidden. Hatred of the *sahabat* is *kufr* and *nifaaq*. We do not discuss the conflicts that occurred among the *sahabat*. The righteous, *al salihiiin*, are men and women who lived exemplary lives. We believe that the *salihiiin* or *awliya* have *karaamaat* (miracles from other than prophets). The *salihiiin* do not deserve being

worshipped in their life or after their death. Worshipping them in order to get nearer to Allah is like worshipping idols. They can be asked to make *dua* during their life but not after their death. It is forbidden to use the *salihin* as intermediaries. It is also considered major *shirk* to ask them for help, to relieve hardships, or bring benefits.

Akhirat

Stages Of Human Life

The life-span, *ajal*, is fixed. Humans pass through 4 phases: non-existence, life on earth, life in the grave, the intermediate phase, and life in the hereafter. Islam does not accept the concept of re-incarnation. Each human has only one earthly life which ends on death. Death is a transitional event that occurs when the *ruh* is separated from the physical body. Death is in the hands of Allah. Humans do not know its appointed time. All humans will die and will have life after death. Life in the hereafter, *hayat al akhirat*, is a higher and better existence than the earthly life, *hayat al duniyat*. Life after death has two consecutive stages: life in the grave and in life after resurrection either in *jahannam* or in *jannat*. On resurrection the *ruh* will rejoin its physical body. Life in the hereafter whether in paradise or in hell is everlasting.

Life In The Grave, *qabr*

Burial in the grave is a respectful send-off unlike most animals that just abandon their dead. It is followed by questioning during which the *ruh* is returned temporarily to the body. The believers will answer correctly whereas the evil ones will not know the answers. Everyone will be told their fate, *jannat* or *jahannam*, while they are still in the *qabr*. There will be rewards and punishment in the *qabr*. Transitional life, *hayat al barzakh*, is between earthly life and life in the hereafter. Some authentic *hadiths* seem to indicate existence of some physiological functions in the deceased in the graves such as shouting, hearing. Ghosts do not exist. There is no direct

between the dead in the *qabr* and living humans on earth. The dead cannot influence events on earth. The living cannot influence events in the *qabr* apart from *dua*. Dreams of the living about the dead are not a true form of communication between the living and the dead. Only dreams of prophets are true. Interpretation of dreams of ordinary humans is not a valid method of knowing anything about the dead.

The Last Day, *yawm al akhirat*

Belief in the last day is a pillar of *iman*. Denial of the last day is unbelief, *kufr*. The knowledge of tlast day is with Allah alone. The pre-events of the last day will be social, physical, and special changes. The social changes will be: mothers enslaved by their children, living in sky scrapers, plenty of wealth, much *fitnat*, disappearance of trust, and disappearance of *iman*,. The physical events will be: rising of the sun from the west. The special events will be emergence of the false messiah; descent of Isa, and emergence of the *daabat al ardh*. This will be followed by the following events of the last day. The horn will be blown to herald resurrection. People will be gathered, their work record will be presented, accounts of their deeds will be made, the balance will be set up, and justice will be established. Intercession on the last day will be by Allah's permission as mentioned in the Qur'an.

After-Life: Jannat and Jahannam

Jannat and *jahannam* were created by Allah before creation of humans. They exist today and are eternal. The *jannat* has many bounties and comforts that will be enjoyed in a physical form. People in *jannat* will enjoy these physical comforts without the biological and psychological stresses of life on earth. *Jahannam* is the abode of the unbelievers and wrong-doers. It is a place of punishment. The Qur'an has described life in hell as bad and frightening. There are many punishments one of which is physical burning. The physiological processes on earth will also occur in hell but will be a means of punishment and not satisfying physiological needs. The drink will not quench thirst. The food will not relieve hunger.

Nature Of The After-Life

Life after resurrection from the graves will be physical and not metaphysical or spiritual. We do not know whether it will be exactly like that on earth or there will be some differences. The Qur'an makes it clear that it will be physical life with physical bodies with physiological functions of that life that are similar to those on earth. The resurrected humans will experience all events of the hereafter as physical beings. There will be no more death after the last day. Those who enter paradise will stay there permanently. Hell will be permanent for certain categories of offenders. Those with minor offences will spend a time of punishment in hell and then be forgiven and enter paradise.

Qadar

Description

Everything is fixed and is under Allah's pre-determination. The two terms *qadha* and *qadar* mean different things. *Qadar* is pre-determination or pre-fixing of events before their occurrence. *Qadha* is a term used to refer to the empirical or practical occurrence of what was pre-determined by *qadar*. In the stage of *qadar* Allah knows what will happen but the human does not. The human has to struggle as best as he can to achieve a desired objective. In the stage of *qadha* the event has occurred, the human has to accept what happened because now he can do nothing to reverse the *qadar* of Allah. Allah's knowledge and will are unrestricted. Humans have to surrender to Allah's will. They cannot change established *qadar* except by *dua*. Belief in *qadar* is associated with contentment of the heart, avoidance of excessive joy and sadness, bravery and initiative, and lack of fear. There is no escape from *qadar* since it operates everywhere. Everything was pre-determined before the creation of the earth and the heavens and is recorded in Allah's great record.

All phenomena and events in the universe follow the program in the record. Ordinary humans have no way of knowing what is in the record. *Qadar* It is part of belief in the unseen because human intellect can not on its own logically work out all aspects of *qadar*.

Will, *iraadat*, Knowledge, '*ilm*', and Power, *qudrat*

Allah's knowledge, will, and power are unlimited. Human will, knowledge, and power are limited. The limited human will can be misguided by shaitan. A human in the course of normal life gets good and bad experiences. A believing Muslim knows that all is part of *qadar* and says 'praise be to Allah', *alhamdu li llaah*, for both good and bad experiences. The terms good and bad in human experience and knowledge are relative. What may appear to be good may turn out to be bad. What may appear to be bad may turn out to be good.

Human Action

All human actions were created by Allah. He knows the actions of humans in advance. Allah tries humans by letting them be free in the choice of their actions but He knows in advance what they will choose. Whatever choices the human makes Allah is forgiving and is kind. Free will entails responsibility and humans are responsible for their actions and are accountable for their choices. Humans should not give up struggling relying on *qadar* and arguing that everything is pre-determined. They have to make all the efforts that is humanly possible to achieve a good result. The laws of causality are fixed such that an action is inevitably followed by the predictable result unless there is special divine intervention. However despite all human effort the results turn out different from the expectation, the human must submit and accept the will of Allah. A human can be guided or misguided. Guidance in the long run is from Allah. Humans within their limited will can exert effort to be guided. All of the human's life on earth is a great test of how well the free will is used.

Causality and Causal Relations

In most human situations phenomena follow the fixed causal laws ie action is followed by an effect. Each event has a cause, *sabab*. All causes are from Allah. The causal laws are called '*sunan Allah fi al kawn*' in Qur'anic terminology. These laws are fixed and are stable. Allah is not bound to obey these laws because they are His laws. His will is above them and can alter them. Allah created the causes and the effects. Thus causes are

part of *qadar*. Normally the cause is followed by the expected result. There are however situations such as prophetic miracles in which divine intervention breaks those physical laws known to humans. In such situations one *qadar* is reversing another *qadar*.

Misunderstanding Of Qadar

Correct understanding of *qadar* requires distinguishing *tawakkul* that is good from *tawaakul* that is bad. *Tawakkul* in relying on Allah after taking all the necessary measures to achieve an objective following the laws of causality. *Tawaakul* is giving up all effort and just wait for things to happen. Human illness is part of *qadar*. Medical treatment is not denial of or attempting to reverse *qadar*. Both the disease and its treatment are part of Allah's all-embracing *qadar*. The human in his limited knowledge can not distinguish between curable and incurable disease. He therefore plays safe by treating all diseases to the best of their ability being fully aware that this is an attempt and leave the rest to Allah. Allah alone determines the life and death. No human can give life or take it away. The human can be involved as an agent but not as a cause. These are matters of *qadar* that the human intellect cannot understand fully. Trying to search into such matters leads to perdition. It is therefore advised not to go deep in matters of *qadar*.

Kufr & Shirk

Kufr, Rejection Of God

Kufr is denial of Allah. *kufr mutlaq* is rejection of all the truth and *kufr muqayyad* is rejection of some of the truth. *kufr 'amali* is by action and *kufr i'itiqaadi* is by belief. *Kufr akbar* manifests as *kufr al tasdiq*; *kufr al takdhiib*, *kufr iba' wa-istikbar ma'a al-tasdiq*; *kufr al-shakk wa-al-dhann*; *kufr al-i'radh*; and *kufr al-nifaaq*. *Kufr asghar* manifests as *kufr al-nimah*; *kufr 'amali*. The *kaafiruun*, have the following characteristics: following falsehood, *ittibau al batil*, following whims and desires, committing crimes, wastefulness, mischief, miserliness, luxury, arrogance, ignorance, love for the world, treachery, transgression, enmity to others, *'inaad*, *ghuruur*,

fujuur, fisq, ghafla, telling lies and hating the truth. The work of the *kafiruun* even if good is not considered. Hypocrisy, *nifaq* is deception in which faith is shown outwardly whereas there is disbelief and rejection of the truth inside. *Riddat* can be by word, *riddat qawliyyat*; by action, *riddat fi'iliyyat*; by belief, *riddat i'itiqaadiyyat*; and by doubt, *al shakk*.

Shirk, Associating Anything With God

Polytheism takes the form of polytheism, dualism, henotheism, pantheism, and monism. Human history is a struggle between *tauhid* and *shirk*. *Shirk* can be classified major *shirk, al shirk al akbar*, and minor *shirk, al shirk al asghar*. It can also be classified as *shirk i'itiqaadi* and *shirk 'amali*. *Shirk akbar* is *shirk al 'ibadat; shirk al-du'a; shirk al-niyyah wa-al-qasd wa al-iradah; shirk al 'amal li ghair al llaah; shirk al-ta'ah; shirk al-mahabbah; shirk al wasaatat; shirk al tawaakul; shirk al raja; shirk fi sifaat al llaah; shirk al huluul; shirk al tasarrif; shirk al khawf; shirk al haakimiyyat; al khudhu'u li ghair al llaah; an dhull li ghairn al llaah; shirk tahliil al haraam; shirk tahriim al halaal; al dhabah li ghair al llaah; shirk al tanjiim*. *Minor shirk* manifests as *riyaa* and making an oath for anything other hand, *al hilf li ghair al llaah*.

Actions And Beliefs That Nullify Tauhid

Rejection of any of the 5 pillars of Islam or the 6 pillars of *iman* nullifies *tauhid*. *Tauhid* is also nullified by doing any of the following for other than Allah: *'ibadat, dhabah, nadhar, hilf, tawakkul, ruku'u, or sujuud*. *Tauhid* is also nullified by rejecting anything from the Qur'an, judging or settling disputes by other than what Allah revealed, acknowledging legislative authority from other than Allah, *tahriim ma ahalla al llaah, Tahliil ma harama al llaah*, separation of religion from the state, apostasy, *riddat*, alliances with the *kaafiruun*, believing the *kaahin & munajjim*, believing *'arraaf* or *saahir* when they claim to know the unseen, *ghaib*. Sins do not nullify *aqidat* unless the sinner has decided on his own to make *haram halal*. Any *ma'asiyat* decreases *iman* or may nullify it completely but it can return in *taubat*.

Leadership *Qiyadat*

- Leadership: Basic Characteristics
- Leaders: Attributes, Skills, and Functions.
- Diseases Of Leaders And Followers
- Communication
- Negotiation

Leadership: Basic Characteristics

Leadership

Leadership is influencing people to do certain things or to move in a certain direction. Leadership can be learned. Good leaders persuade and do not rely on command, fear, or authority. They serve and do not dominate. They use leadership power to improve and make a change. They pull and do not push. They empower followers by coaching and delegation. Good leaders rely on personal power (character, expertise, charisma, and personal relations) more than positional power (formal authority, decisions, rewards, punishments, information, and organizational resources). Leadership credibility is based on competence, character, self-confidence, activity and drive, boldness and assertiveness. Leadership is a necessity and its absence means chaos. Good leadership leads to success; bad leadership leads to frustration and failure. One of the harbingers of doom is to place leadership authority in the wrong hands.

Leaders

Leadership is exercised by almost everybody. Its effectiveness is increased by formal training or job experience. Its success depends on follower consent. Leaders face problems of loneliness, taking responsibility for failures, follower problems (disloyalty, poor values, dissent), external threats, and lack of privacy. A leader as a human has strengths and weaknesses. Leaders can be autocratic, democratic, and laissez-faire. They

can be transactional, transformational, or charismatic. They can be task oriented or people-oriented. The appropriate style of leadership is determined by the situation on the ground. Some situations require combinations of leadership styles. Management and leadership skills and functions are different but are found in an individual in varying proportions. Leadership is about effectiveness, intuition, long-term vision, change, challenging the status quo, innovation, development, originality, and motivation of others. Management is about rational problem-solving, efficiency, process and mechanics, stability, harmony, status quo, short-term view, following and not innovating.

Followers

Followers are described as lazy or hardworking, taking or shunning responsibility, 'yes people' following whatever is moving, survivors avoiding trouble, alienated and do not caring, and obedient or rebellious. Followers differ in intelligence, education, experience, honesty, respect for leaders, and gratitude. Followers are part of leadership situation, they play an important function in a leadership situation, and are not passive spectators. Books of history ignore follower. Followers close to the leader can guide or misguide him. The duties of the followers to the leader are obedience, respect, advice and correction, feedback, and loyalty. Leader must rely on the followers and make them know they are trusted and are valued. A good leader discourages false praise by followers and development of a personality cult.

Functions & Activities Of Leaders

A leader may play one of the following roles/functions: clarification of vision, goals, and objectives; making decisions and solving problems; strategic and tactical planning; training; coordinating and integration; representation the organization; managing and resolving conflicts; motivation of followers; assigning tasks; maintaining positive and smooth working relationships; participation and not being aloof; evaluation of self and of followers; forming groups, coaching them and

delegating responsibility to them; and communication (the most important function of leadership).

Failure Of Leadership

A leader fails due to several often inter-related causes: refusal to admit mistakes; feeling indispensable; dictatorship; fear for position and not developing replacements; disloyalty to superiors, peers, followers and the organization; lack of creativity; lack of common sense; lack of human skills; failure to produce results; following the crowd and not leading; condoning or tolerating incompetence; failure to recognize and reward good work, and hatred by the followers. A leader is hated for impersonal behavior, not listening to followers, self importance, wrong decisions, claiming credit for followers' work, blaming followers for his mistakes, secretiveness, withholding information, not protecting followers from external attacks and criticizing them in public, not consulting followers, and over-working followers, being arrogant and feeling indispensable, putting people down, mistrust and disloyalty, inaccessibility, poor human relations, and following the crowd. A leader hated by followers should resign in the interests of the organization.

Leaders: Attributes And Skills

Attributes Of Leaders

Most leadership personal attributes and skills (conceptual, practical, and human) can be learned. Personal attributes are character and personality. Conceptual skills are intellectual functions (analytic, rational, and intuitive) needed for planning, coordination and integration of activities. Practical skills are needed for technical performance. Human skills are needed to understand and motivate followers. Allah gives authority to whomever He wants among many qualified for leadership. Since not everybody can become a leader, everybody must be prepared to be a good follower. The best leaders have no ambition to lead, they lead when called upon but will equally be happy as followers. Effective leaders monitor and learn from the environment, benefit from opportunities, and avoid

dangers. They time actions and interventions for maximum impact and advantage. They have positive attitudes (derived from right ideas) and moral values (derived from *tauhid*, *khilafat*, and *'adl*). Optimism and good behavior reflect a positive attitude. Pessimism, racism, and prejudice reflect negative attitudes. Leaders differ from non-leaders in drive, motivation, honesty, integrity, self-confidence, emotional stability, and intelligence. Drive includes desire for achievement, high ambition, high energy levels, tenacity and initiative. Successful leaders are motivation to lead, to take charge, to make a change, to improve, to influence, and to exercise power for achieving goals.

A leader must have a strong personality, mental and physical stamina, and aptitude to take responsibility and to be accountable. Strength of personality is not violence, roughness or stubbornness. It is strength of character, sticking to moral values and attitudes, avoiding the immoral even if expedient and attractive. A leader must be brave so that the followers are firm and reassured in a crisis or danger. He must be objective and not confuse personal and organizational interests. He focuses on the organization, credits his work to the organization, does not overestimate his importance as an individual, and discourages development of a personality cult. He must have a healthy mixture of confidence (for the organization) and humility (for himself). He must have a dignified physical appearance without extravagance. He must accept and learn from previous mistakes, live a simple life away from extravagance, and not distinguish himself from the followers. He must be higest even in small matters, have financial integrity and transparency, and avoid any appearance of impropriety.

Conceptual Skills Of Leaders

The conceptual skills are vision, setting goals, prudence, knowledge, and commitment. Leaders see far, have a broad view, are ummatic and not parochial. They see local issues from a holistic ummatic context but they use local solutions for local problems. They accept diversity, get consensus on strategic issues, set goals, avoid speculation, and balance risk

with caution. They acquire basic knowledge but rely on others for specialized knowledge. They are committed to the organization (vision and values) and the followers. They fulfil promises and are committed to carrying out decisions. They are flexible in changing strategy and tactics when necessary but they remain committed to the permanent values of the organisation. Part of the leader's commitment is to lead for no personal gain or ambition seeking leadership.

Practical Skills Of Leaders

The main practical skills of leaders are communication, decision making, planning and execution, team leadership, motivation, conflict resolution, and maintaining relations. Communication conveys vision and plans to the followers. Leadership fails if communication fails. Failure to make correct decisions on time or solving problems timely leads to leadership failure. Managerial functions are planning, setting goals & objectives, and evaluation. Leaders form and lead work groups. They coordinate their work and allocate tasks.

Human Skills Of Leaders

Good leaders show concern, respect, and consideration for followers. They understand those below them as unique individuals to be dealt with in an individualized way. They have a firm belief in people. They have compassion and empathy. They have high consideration for others. They have no pride and are like their followers not seeking to be different from or superior to them. They are lenient and forgiving. They treat their followers well. They protect the followers from both physical and emotional hurt. They represent followers and their interests in front of others.

Diseases Of Leaders And Followers

Background Of Leadership Diseases

Leaders and followers have diseases. The diseases could co-exist alongside good attributes. Some bad leaders are actually psychologically sick: sadists, megalomaniacs, jealous, immature, or psychopathic personalities. Some have deviant values.

Diseases Of Leaders In The Qur'an and Sunnat

The Qur'an has told stories of bad leaders from which we learn a lot about leadership diseases. Examples of bad leaders are Fir'aun, Nimrod, Dhu al Nuwaas, and others.

Diseases That Manifest In The Person

Disease related to the personality of the leader are pride and vanity, petty-mindedness, uncompensated weaknesses, ignorance, and lack of creativity.

Diseases That Manifest In Dealing With Followers

Diseases that manifest in dealing with followers include seeking excessive veneration, oppression and injustice, manipulation, dishonesty, seeking false reputation, and abandoning followers

Diseases Of Followers

Diseases of followers include hypocrisy, insincerity, bad advice for leaders, disloyalty, and flattery.

Communication

Nature Of Communication

Communication is transfer of information using symbols. The meaning of the symbols is interpreted subjectively by the recipient. Communication may be consciously or unconsciously. It may be verbal (oral or written) or non-verbal (body language & appearance). Its elements are the sender, the message, the medium, the receiver, and feedback. Its functions are informing, controlling, expressing emotions, and motivating. Its channels are personal static such as letters, impersonal static such as flyers, direct interaction such as face-to-face communication, and indirect interaction such as telephone communication. Perception, the organizing and interpreting of incoming information, is selective being influenced by environment, background knowledge, and background attitudes. Different people perceive the same communication differently.

Communication Process

The communication process consists of conceptualization of ideas, encoding and transmitting the message, decoding and interpretation of the message, and feedback. Words have power and must be selected carefully because they determine and restricts thought. Language must be appropriate (by intimacy, professional circles, age group, and gender), individualized, precise, believable, credible, and pleasant. Communication style reflects basic personality. Barriers to effective communication are prejudgment before communication, differences between communicators (self-image, status, roles, personality, cognitive ability, physical situation, social status, culture, vocabulary, and language), distractions, emotional resistance to being on the receiving end, time constraints, poor listening, poor speech, bad timing, and unsuitable circumstances. Other causes of communication failure are multiple meanings of words, information overload, verbosity, value judgment, and filtering.

Communication In Small Groups

Face-to-face communication is usually the best form of communication because of immediate feedback. Success of oral communication (speaking and listening) is affected by language use, voice and inflexion, speed and volume, periods of silence, active listening, body language, clear speech with an objective, repetition, conciseness, and feedback. When arguing a case, start from a common ground, use only logical reasoning, and do not be emotional. Silence is better than careless, wrong, offensive, or misleading talk. What leads to confusion should not be said even if it is true. Listening can be active (with feedback) or passive (no response). Barriers to effective listening are weak extrinsic motivation, personal constraints, environmental constraints, and poor timing of the message.

Public Speaking

Public speaking informs, entertains, inspires, convinces, motivates, teaches, and trains. It involves the speaker, the message, the situation, feed-back, and listeners.

The speaker must have integrity, knowledge, a positive attitude, sensitivity to the audience and the situation, oral skills, self-confidence, self-control, good preparation, energy, sincerity, and credibility (based on physical appearance, posture, gestures, movements, and voice quality). A successful speech is short, simple, sincere, related to the audience, well prepared, based on knowledge of the subject, innovative, and creative. The topic is narrowed to 2-3 points. The introduction is a concise overview that raises interest and expectations. The body of the speech consists of main points as well as links and transitions to ensure a smooth flow. The conclusion summarizes key ideas, gives a sense of completeness, and appeals to the audience. The language must be clear and appropriate for the topic, situation, and audience. Rehearsing a speech increases the speaker's confidence. The methods of delivery are from memory, by reading manuscript, ex-tempore, and impromptu. Retention is increased by audio-visuals, repetition, periods of silence, audience participation, short and simple speeches, examples and stories, acronyms, memorable quotes, sincerity, appropriate body language and emotion. Problems from the audience are heckling, hostility, inattention, and challenges by experts. The speaker must anticipate questions and prepare for them. He must empathize with the questioner and show he understands them.

Written Communication

Written communication projects image about the writer and leaves a permanent record. The aim of official writing is to express and not impress. It must be brief, precise, direct, forceful, accurate, and result-oriented. Long convoluted sentences should be abandoned for short powerful sentences. The language must be simple and devoid of technical jargon. Writing is helped by thinking logically of blocks of ideas and then translating them into a document. Writing must be emotionally honest, evidence-oriented, directed at solving problems, and purposive. The writing process consists of creating followed by revising.

Negotiation

Nature And Purpose Of Negotiations

Daily life, public or private, revolves around negotiating with others. The Qur'an has recorded many instances of discussion in the form of negotiations always emphasizing the need for discussion in a good way. Negotiation is necessary to protect your interests, and get as much advantage as possible without entering into costly and bruising confrontations. Most conflicts can be resolved through negotiation. Good negotiation turns confrontation into cooperation. Physicians must be able to negotiate with their patients and relative to agree on a treatment plan otherwise a lot of conflicts and misunderstandings will occur. Negotiation skills can be learned. Negotiations can be win-win in which each party leaves satisfied or win-lose in which one party leaves with a feeling of winning and the other leaves with a feeling of having lost. A win-win outcome is the best in a negotiation. It ensures that each party gets the maximum it can from the transaction, part as friends who can work together again. Both objectives and relations must be considered. Future relationships may be lost by aggressive pursuit of objectives.

Strategy Of Negotiation

Negotiating is strategy. Never enter a negotiation unless you have a well worked out strategy and a clear objective. A negotiator must know the bottom-line from the beginning and must work out the worst-case scenario. A key to good negotiation is to be able to understand the other party's negotiation strategy and to acknowledge its strong and valid points. Understanding does not imply acceptance but goes a long way toward a win-win outcome. It is better to use persuasion rather than power. It is better to warn than to threaten. Provocations should be avoided. A win-lose formula in negotiations can work only if future relationships do not matter. Win-lose situations often end up as lose-lose to the detriment of both parties.

It is advisable aim at a win-win outcome even if you can get away with a win-lose outcome. Negotiations should not wander away from rationality. Every negotiation involves making concessions and compromises. Privacy, patience, and time are

needed for success of negotiations. Simultaneous negotiation over several issues at the same time increases the possibility of a compromise. Brinkmanship and bluffs lead to disaster in most negotiating situations.

Negotiation Tactics

Aggressive tactics are pressure tactics and intimidation. Friendly tactics are the kid-glove and the good-guy/bad-guy combination. Evasive tactics are hiding behind an invisible authority, stone walling, and deception. Provocative tactics are attempts to erode confidence, provoking emotions, anger, and personal attacks. Effective approaches consist of being aware of risks, an incremental approach, follow-up and implementation.

Managing A Negotiation Session

The actual negotiation session should be planned as much as possible. Never leave anything to chance. Background information must be collected. A negotiating strategy must be adopted. A negotiation session has the following main stages: setting the agenda, opening the negotiations, demands and offers, narrowing differences between the parties, final bargaining, persuading the other party to cross the last hurdle to agreement, and implementation of the negotiated deal. Think about implementation of negotiated deal during the negotiation. Minimize risks in the deal.

Difficult Negotiations

The following are barriers to successful negotiations: a negative attitude to negotiations, poor communication skills, lack of knowledge, lack of confidence in negotiations, fear of confrontation, being emotional and not being objective, being reactive, treating the other party as adversaries who must lose, and aggressive behavior. Deadlocked negotiations are natural because there are issues that are not negotiable. Deadlocks should be anticipated and contingency plans should be made. If it is in your interests to continue the negotiations, devise ways and means of getting around a dead-lock. Stay calm and keep negotiating. You have to change the rules of the game or reframe issues. Consider all alternatives and look for options. Utilize maximum flexibility but never lose sight of the final goals and your permanent interests.

Contemporary-Ethico-Legal issues from an Islamic Legal Perspective

Abstract

The paper uses the theory of Purposes of the Law, maqasid al shari'at, to discuss contemporary ethico-legal issues in medicine relating to reproductive technology (assisted reproduction, contraception, abortion, sex selection, and genetic testing), end of life issues (artificial life support, euthanasia), transplantation (stem cells and solid organs), cosmetic and reconstructive surgery, post-mortem issues (embalming, cryopreservation, and autopsy), and research (human and animals). Ethical procedures conform to and do not violate the 5 maqasid al shari'at which are: preservation of diin, hifdh al ddiin; preservation of life, hifdh an nafs; preservation of progeny, hifdh al nasl; preservation of the intellect, hifdh al 'aql; and preservation of resources, hifdh al maal. Also used in the discussion are legal axioms, qawa'id al shari'at, that assist in ethico-legal reasoning.

1.0 Derivation of Medical Ethics from the Law

1.1 Relation between law and ethics

Islamic Law is comprehensive being a combination of moral and positive laws. It can easily resolve ethical problems that secularized law, lacking a moral religious component, cannot solve. Many contemporary ethical issues in medicine are moral in nature and require moral guidance that can be provided only from religion. The Law is the expression and practical manifestation of morality. It automatically bans all immoral actions as *haram* and automatically permits all what is moral or is not specifically defined as *haram*. The approach to ethics is a mixture of the fixed absolute and the variable. The fixed and absolute sets parameters of what is moral. Within these parameters, consensus can be reached on specific moral issues. Ethical theories and principles are derived from the basic Law but the detailed applications require further *ijtihad* by physicians. Islam has a parsimonious and rigorously defined

ethical theory of Islam based on the 5 purposes of the Law, *maqasid al shari'at*. The five purposes are preservation of *ddiin*, life, progeny, intellect, and wealth. Any medical action must fulfill one of the above purposes if it is to be considered ethical. Legal axioms or principles, *qawa'id al shari'at*, guide reasoning about specific ethico-legal issues and are listed as intention, *qasd*; certainty, *yaqin*; injury, *dharar*; hardship, *mashaqqat*; and custom or precedent, '*urf* or '*aadat*.

1.2 The Purposes of the Law in Medicine, *maqasid al shari'at fi al tibb*

Protection of *ddiin*, *hifdh al ddiin*: Protection of *alain* essentially involves '*ibadat* in the wide sense that every human endeavor is a form of '*ibadat*. Thus medical treatment makes a direct contribution to '*ibadat* by protecting and promoting good health so that the worshipper will have the energy to undertake all the responsibilities of '*ibadat*. A sick or a weak body cannot perform physical '*ibadat* properly. Balanced mental health is necessary for understanding '*aqidat* and avoiding false ideas that violate true '*aqidat*.

Protection of life, *hifdh al nafs*: The primary purpose of medicine is to fulfill the second purpose of the Law, the preservation of life, *hifdh al nafs*. Medicine cannot prevent or postpone death since such matters are in the hands of Allah alone. It however tries to maintain as high a quality of life until the appointed time of death arrives. Medicine contributes to the preservation and continuation of life by making sure that physiological functions are maintained. Medical knowledge is used in the prevention of disease that impairs human health. Disease treatment and rehabilitation lead to better quality health.

Protection of progeny, *hifdh al nasl*: Medicine contributes to the fulfillment of the progeny function by making sure that children are cared for well so that they grow into healthy adults who can bear children. Treatment of infertility ensures successful child bearing. The care for the pregnant woman, peri-natal medicine, and pediatric medicine all ensure that children are born and grow healthy. Intra-partum care, infant and child care ensure survival of healthy children.

Protection of the mind, *hifdh al 'aql*: Medical treatment plays a very important role in protection of the mind. Treatment of physical illnesses removes stress that affects the mental state. Treatment of neuroses and psychoses restores intellectual and emotional functions. Medical treatment of alcohol and drug abuse prevents deterioration of the intellect.

Protection of wealth, *hifdh al mal*: The wealth of any community depends on the productive activities of its healthy citizens. Medicine contributes to wealth generation by prevention of disease, promotion of health, and treatment of any diseases and their sequelae. Communities with general poor health are less productive than healthy vibrant communities. The principles of protection of life and protection of wealth may conflict in cases of terminal illness. Care for the terminally ill consumes a lot of resources that could have been used to treat other persons with treatable conditions.

1.3 The Principles of the Law in Medicine, *qawa'id al shari'at fi al tibb*

The principle of intention, *qa'idat al qasd*: The Principle of intention comprises several sub principles. The sub principle 'each action is judged by the intention behind it' calls upon the physician to consult his inner conscience and make sure that his actions, seen or not seen, are based on good intentions. The sub principle 'what matters is the intention and not the letter of the law' rejects the wrong use of data to justify wrong or immoral actions. The sub principle 'means are judged with the same criteria as the intentions' implies that no useful medical purpose should be achieved by using immoral methods.

The principle of certainty, *qa'idat al yaqeen*: Medical diagnosis cannot reach the legal standard of absolute certainty, *yaqeen*. Treatment decisions are based on a balance of probabilities. The most probable diagnosis is treated as the working while those with lower probabilities are kept in mind as alternatives. Each diagnosis is treated as a working diagnosis that is changed and refined as new information emerges. This provides for stability and a situation of quasi-certainty without which practical procedures will be taken

reluctantly and inefficiently. The principle of certainty asserts that uncertainty cannot abrogate an existing certainty. Existing assertions should continue in force until there is compelling evidence to change them. All medical procedures are considered permissible unless there is evidence to prove their prohibition.

The principle of injury, *qa'idat al dharar*: Medical intervention is justified on the basic principle is that injury, if it occurs, should be relieved. An injury should not be relieved by a medical procedure that leads to an injury of the same magnitude as a side effect. In a situation in which the proposed medical intervention has side effects, we follow the principle that prevention of an injury has priority over pursuit of a benefit of equal worth. If the benefit has far more importance and worth than the injury, then the pursuit of the benefit has priority. Physicians sometimes are confronted with medical interventions that are double edged; they have both prohibited and permitted effects. The guidance of the Law is that the prohibited has priority of recognition over the permitted if the two occur together and a choice has to be made. If confronted with 2 medical situations both of which are injurious and there is no way but to choose one of them, the lesser injury is committed. A lesser injury is committed in order to prevent a bigger injury. In the same way medical interventions that are in the public interest have priority over consideration of individual interest. The individual may have to sustain an injury in order to protect public interest. In many situations, the line between benefit and injury is very fine.

The principle of hardship, *qaidat al mashaqqat*: Medical interventions that would otherwise be prohibited actions are permitted under the principle of hardship if there is a necessity. Necessities legalize the prohibited, *al daruuraat tubiihu al mahdhuuraat*, and mitigate easing of legal rules and obligations. In the medical setting a hardship is defined as any condition that will seriously impair physical and mental health if not relieved promptly. Committing the otherwise prohibited action should not extend beyond the limits needed to preserve the purpose of the Law that is the basis for the legalization. The

temporary legalization of prohibited medical action ends with the end of the necessity that justified it in the first place.

The principle of custom or precedent, *qaidat al urf*: The standard of medical care is defined by custom. The basic principle is that custom or precedent has legal force. What is considered customary is what is uniform, widespread, and predominant and not rare. The customary must also be old and not a recent phenomenon to give chance for a medical consensus to be formed.

1.4 Evolution of medical jurisprudence, *tatawwur al fiqh al tibbi*

There are three stages in the evolution of *fiqh tibbi*. In the first period (0 to circa 1370H) it was derived directly from the Qur'an and sunnat. In the second period (1370-1420) rulings on the many novel problems arising from drastic changes in medical technology were derived from secondary sources of the Law either transmitted (such as analogy, *qiyaas*, or scholarly consensus, *ijma*) or rational (such as *istishaab*, *istihsaan*, and *istirsaal*). The failure of the tools of *qiyaas* to deal with many new problems led to the modern era (1420H onwards) characterized by use of the Theory of Purposes of the Law, *maqasid al shari'at*, to derive robust and consistent rulings. *Ijtihad maqasidi* is becoming popular and will be more popular in the foreseeable future.

The theory of *maqasid al shari'at* is not new but many people had not heard about it because its time had not yet come. By the 5-6th centuries of hijra the basic work on the closed part of the Law derived directly from primary sources was complete. Any further developments in the law required opening up new the flexible part of the law which necessitated discussion of the purposes of the law. It was at this time that al Ghazali and his teacher Imaam al Haramain al Juwayni introduced the ideas that underlie the concept of *maqasid al shari'at*. Other pioneers of the theory of *maqasid al shari'at* were Imaam an Haramain al Juwayni and his student Abu Hamid al Ghazzali (d. 505 H), Sheikh al Islam Ahmad Ibn Taymiyyah (d. 728H) and his student Ibn al Qayyim al Jawziyyat (d. 751H). The field of the purposes of the law witnessed little development until revived

by the Abdalusian Maliki scholar Imaam Abu Ishaq al Shatibi in the 8th century AH who elaborated Ghazzali's theory. Our subsequent discussion of the purposes of the law is from al Shatibi's book *al muwafaqaat fi usuul al shariat*

2.0 Ethico-Legal Issues in Reproductive Technologies

2.1 Assisted Reproduction

Overview: The Law allows assisted reproduction in fulfillment of the purpose of preservation of progeny, *hifdh al nasl*, provided it does not violate the purpose of preserving lineage, *hifdh al nasab*, and does not cause injury that violates the purpose of life, *hifdh al nafs*, or introduce any immorality into society.

In vivo insemination, *al talqiih al istinaa'e al daakhilii:* Artificial intra-uterine insemination with husband's sperm, *talqiih sina'i dhaati* is permitted by the Law provided safeguards are taken to ensure that spermatozoa do not get mixed up in the laboratory or the clinic. The Law prohibits artificial in vivo insemination of a wife with donated sperm from a strange man or in vivo insemination of a strange woman with the husband's sperm because that would violate the principle of preserving lineage, *hifdh al nasab*.

In vitro fertilization, *al talqiih al istinaa'e al khaariji:* The Law permits *in vitro* fertilization (IVF) if the sperm and ovum are from legally wedded husband and wife and the zygote is implanted in the same wife. All other forms of IVF involving ovum or sperm donation are prohibited because they violate the principle of *hifdh al nasab*.

Ethical and legal issues: Several ethical issues arise in assisted reproduction: disclosure of infertility before marriage, artificial insemination after death of the husband, legality of masturbation for obtaining sperms, paternity and maternity of children born of illegal procedures, disposal and use of unused fertilized ova, sex selection and selective fetal reduction, embryo splitting, developing embryos for purposes other than their use in assisted reproduction, using embryos to produce a clone, using fetal gametes for fertilization, trans-species

fertilization (mixing human and animal gametes), mixing of gametes or embryos of different parentage to confuse biological parentage, implanting the embryo in a non-human species uterus, replacing the nucleus of the embryo, embryo flushing, commercial trading in sperms, gametes, or embryos, and use of gametes from cadavers. All these can be resolved by using the relevant Purpose of the Law and consideration of the specific circumstances of each case.

2.2 Contraception

Overview: There is basic permissibility of contraception from the hadith on coitus interruptus, *tarkhis fi al 'azal*. This is permission for each individual couple. Contraception as a national or community policy is repugnant to the purposes of the Law and could lead to demographic disequilibrium. Decisions on contraception must be by mutual consent of the spouses. If contraception is a *dharuurat* for preserving the life of the mother, the husband's agreement is not required. Choice of the method of contraception must be based on the purposes of the Law and Principles of the Law. There is no consensus among jurists on sterilization as a method of contraception. Contraception as part of a national population control policy is prohibited by Law.

Male contraception: The permissible reversible methods for males are the condom, coitus saxanicus, *coitus reservatus*, and *coitus interruptus*.

Female contraception: Permissible reversible methods for females are either mechanical (the diaphragm, the cervical cap, the vaginal sponge) or chemical (spermicides, oral contraceptive pills). Some forms of IUD are not permitted because they cause early abortion.

Socio-demographic impact: Availability of safe contraception removes the fear of pregnancy and encourages sexual promiscuity. It also encourages temporary sexual unions devoid of child responsibilities. Wide spread use of contraception will eventually cause population imbalance by age and gender. Widespread practice of birth control makes it

easier to accept and practice genocide by decreasing respect for human life.

2.3 Reproductive cloning

Overview: We must start by distinguishing cloning of individual cells and tissues from cloning of a whole organism. Cloning is not creation of new life from basic organic and non-organic matter since creation of life *de novo* is the prerogative of Allah alone. Cloning is a form of asexual reproduction that is common in plants and animals. Adam (PBUH) had neither a mother nor a father. Isa (PBUH) was reproduced asexually. The clone is the exact replica of the original. Genetic recombinations that are responsible for the great variety of normal reproduction do not occur in cloning.

Rulings on cloning: The Islamic tradition discourages speculative thinking about hypothetical events. Issues are discussed from the legal and ethical aspects after they have occurred. We therefore cannot engage in a detailed discussion of human cloning until it has occurred and we see its implications in practice. We can only review general ideas from what we already know about cloning with no definitive conclusions.

Spiritual quality of a clone: The issue of quality of life arises in the case of cloning if ever it becomes a reality. The product of cloning will not have the same quality, as we know it in humans today. This is because a human is both matter and spirit. During the first trimester of intra-uterine development the soul, Allah inserts *ruh* into the body. There is one *ruh* for each being. Thus the cloned product cannot have a *ruh* and will therefore not be human being, as we know. The product of cloning will have all the biological properties of the ordinary human being but will not have the spiritual qualities. Thus the life of the cloned product will be of little or no quality. We can only speculate how that cloned product will behave. The possibilities are frightening as the brave new world of biotechnology unfolds.

Ethical implications: The major ethical issues in cloning are: loss of human uniqueness and individuality, hazardous unexpected products from cloning, and criminal misuse of the cloning technology. Legal issues will arise in inheritance of the real son and the cloned son.

Social implications: Likely socio-demographic implications are loss of human dignity, production of human monsters with no family background, and destruction of lineage, *nasab*.

2.4 Abortion

Unwanted pregnancy: The issue of 'unwanted pregnancy' is a recent concept in human history and is associated with social stresses of modern life. The purposes of the law, *maqasid al shari'at*, and its principles, *qawa'id a shari'at*, focus on preventing 'unwanted pregnancy', protecting the rights of the fetus and infant, and mitigating the adverse effects of 'unwanted pregnancy' by social measures.

The law on feticide: Life is sacred. All lives have equal worth whether in utero or in terminal illness. Taking the life of any one person without legal justification is like killing the whole human race. Abortion is criminal homicide because life is considered to start at conception. Abortion is immoral because it encourages sexual immorality and promiscuity without fear of pregnancy. Abortion is the lesser of two evils in cases of serious maternal disease because one life is lost instead of two. In all forms of abortion whether legal or illegal, the aborted fetus must be treated with respect. It must be washed, shrouded, and buried properly. The Law prescribes severe punitive measures for causing abortion of a fetus. *Diya* is paid if the fetus comes out with signs of life and dies thereafter. *Ghurrat*, which is less than *diya*, is paid if the fetus comes out dead. The physician or any other accessory to abortion is guilty of the offense of causing abortion even if either or both parents consented to the procedures.

2.5 Sex selection, *al tahakkum fi al jins*

Sex preference is natural. Gender selection is by Allah (shura: 49) and no human efforts will contradict Allah's will. Human efforts can only succeed if Allah wills so. Efforts to get an

offspring of a particular gender are in general permissible because the *dua* that prophets made are considered part of the effort. Discussion centers on the methods used because some are permitted while others are prohibited. Natural methods (selecting days of copulation before and after ovulation & changing upper vaginal chemistry artificially) are not effective. Rulings are still being discussed on methods such as separation of male and female sperms by centrifuging followed by *in vivo* insemination and gender pre-selection and implanting only zygotes of desired gender in *in vitro* fertilization. Some jurists consider sex selection permissible for the couple but are prohibited when they are part of community or national policy. There are long-term consequences that must be considered. Severe gender imbalance will threaten marriage and lead to family breakdown. Eventually the purpose of the law to preserve progeny, *hifdh al nasl*, cannot be fulfilled.

2.6 Genetic testing and genetic counseling

Genetic testing is used for disease diagnosis, pre natal diagnosis, genetic screening, criminal investigations, and settling paternity issues. *Genetic counseling* is carried out before and after genetic testing. The objective of counseling before testing is to provide information about genetic disorders and the risks of disease to individuals and families so that they may make informed decisions. Pre marital counseling is recommended for close relatives. Genetic testing can be carried only if there is informed consent of competent adults. Genetic data is confidential and cannot be disclosed except following guidelines.

3.0 Ethico-Legal Issues In Medical And Surgical Technologies

3.1 Artificial Life Support

Legal definitions of terminal illness and death: Terminal illness is defined as illness from which recovery is not expected. The manner in which death is defined affects the ruling, *hukm*, about life support. Death can be defined using the traditional criteria of cardio-respiratory arrest. It can also be defined as brain death either higher brain death or death of the brain stem or whole brain death. If death is defined in the

traditional way, life support cannot be withdrawn at any stage. If the definition of higher brain death is accepted, life support will be removed from persons who still have many life functions (like respiration, circulation, sensation). The question of quality of life is also raised in the definition of life. The assumption is that there must be some quality to human life for it to be worth living. The exact definition of quality is still elusive. It is argued that euthanasia saves the terminally ill from a painful and miserable death. This considers only those aspects of the death process that ordinary humans can perceive. We learn from the Qur'an that the death of non-believers is stressful in the spiritual sense. Believers can have a good death even if there is pain.

Palliative care: The aim of palliative care is pain control, psychological support, emotional support, and spiritual support. Death can be made a pleasant experience with appropriate palliative care. Palliative care was traditionally in the family but it has recently moved to institutions. Lessons about palliative care can be learned from the terminal illness of the prophet and his companions.

Principles of certainty and autonomy: When the definition of death and the exact time of its occurrence are still matters of dispute, a major irreversible decision like withdrawing life support cannot be taken. Islamic law strictly forbids action based on uncertainty, *shakk*.

The purposes of life and wealth: The purpose of preserving life may contradict the purpose of preserving wealth. Life comes before wealth in order of priorities. This however applies to expenditure on ordinary medical procedures and not heroic ones of doubtful value because that would be waste of wealth.

Legal rulings on initiating and withdrawing life support: The terminally ill patient, who takes a major risk, should make the final informed decisions after clarification of the medical, legal, and ethical issues by physicians and jurists, *fugaha*. The family may request that life support be terminated if the patient is in pain or coma. Self-interest may motivate some members

of the family and others with personal interest to hasten the legal death of the terminally ill patient. According to Islamic law, any inheritor who plays any role direct or indirect in the death of an inheritee cannot be an inheritor. It is therefore impossible for any member of the close family to take part in life support withdrawal decisions. Physicians and other health care givers may abuse withdrawal of life support and kill people for various motives.

3.2 Euthanasia

Concepts: Euthanasia is carried out illegally for patients in persistent vegetative states or those in terminal illness with a lot of pain and suffering. Active euthanasia, an act of commission that causes death, is taking some action that leads to death like a fatal injection. Passive euthanasia, an act of omission, is letting a person die by taking no action to maintain life. Terminal sedation with very high doses has the dual effect of controlling pain and causing respiratory failure. Islamic Law views all forms of euthanasia, active and passive, as homicide. Those who give advice and those who assist in any way with suicide are guilty of homicide. A physician is legally liable for any euthanasia actions performed even if instructed by the patient.

Analysis using purposes of the law, *maqasid al shari'at*: Euthanasia violates the Purpose of the Law to preserve Life by taking life and it leads to cheapening human life making genocide more acceptable. It violates the purpose of religion by assuming Allah's prerogative of causing death.

Analysis using principles of the law, *qawaid al shari'at*: According to the principle of intention, there is no distinction between active and passive euthanasia because the end-result is the same. The principle of injury makes euthanasia illegal because it tries to resolve the pain and suffering of terminal illness by causing a bigger injury which is killing. Continuation of pain in terminal illness is a lesser evil than euthanasia. According to the legal principle of *sadd al dhari'at*, prohibition of euthanasia closes the door to corrupt relatives and physicians killing patients for the sake of inheritance by claiming euthanasia. Euthanasia reverses the customary role of

the physician as a preserver into a destroyer of life. A distinction in Law exists between withholding life support and withdrawing it. The issue is legally easier if life support is not started at all according to a pre-set policy and criteria. Once it is started, discontinuation raises legal or ethical issues. Continuation is easier than starting. Euthanasia like other controversial issues is better prevented than waiting to resolve its attendant problems. The patient cannot legally agree to termination of life because life belongs to Allah and humans are mere temporary custodians. The determination of *ajal* is in the hands of Allah. A patient who has legal competence, *ahliyyat*, makes final decisions about medical treatment and nutritional support. Patients in terminal illness often lose *ahliyyat* and cannot make decisions on their treatment. A living will is a non-binding recommendation and it can be reversed by the family. They however cannot make the decision for euthanasia.

General conclusions: Our analysis has shown that there is no legal basis for euthanasia. Physicians have no right to interfere with *ajal* that was fixed by Allah. Disease will take its natural course until death. Physicians for each individual patient do not know this course. It is therefore necessary that they concentrate on the quality of the remaining life and not reversal of death. Life support measures should be taken with the intention of quality in mind. Instead of discussing euthanasia, we should undertake research to find out how to make the remaining life of as high a quality as is possible. The most that can be done is not to undertake any heroic measures for a terminally ill patient. However ordinary medical care and nutrition cannot be stopped. This can best be achieved by the hospital having a clear and public policy on life support with clear admission criteria and application to all patients without regard for age, gender, socio-economic status, race, or diagnosis.

3.3 Solid organ transplantation

Background: The first organs involved in transplantations were the skin, the bone, the teeth, and the cornea. Later kidney, heart, lung, and liver transplants were achieved. Glandular and

neurohumoral organs will be transplantable in the future. Transplantation decisions are a balance between risk and benefit. Ethical and legal problems of transplantation are temporary; they will disappear with the use of xenografts, artificial organs, and cloned organs.

Legal rulings about transplantation: Transplanting animal or artificial organs or auto-transplantation raise fewer ethical issues than transplantation from a donor: The evidence for transplantation from a human donor, living or dead, is by *qiyaas* with permission to eat flesh of a dead person in case of *dharuurat*. The main guide about transplantation is the purpose of maintaining life of the donor and the recipient. Under the principle of hardship, necessity and hardship legalize what would otherwise be objectionable or risky. Mutilation of a dead corpse is normally objectionable but where transplantation can preserve good health this objection is set aside. Under the principle of injury, lowering donor risk has precedence over benefit to the recipient. The complications and side-effects to the recipient must be a lesser harm than the original disease. Transplantation relieves an injury to the body in as far as is possible but its complications and side-effects should be of lesser degree than the original injury. Abuse of transplantation by abducting or assassinating people for their organs could lead to complete prohibition under the principles of dominance of public over individual interest. Prevention of harm has priority over getting a benefit and pre-empting evil. Under the principle of custom brain death fulfills the criteria of being a widespread, uniform, and predominant customary definition of death that is considered a valid custom. Selling organs could open the door to criminal commercial exploitation and may be forbidden under the purpose of maintaining life, the principle of preventing injury, the principle of closing the door to evil and the principle of preventing motive. Protecting innocent people from criminal exploitation is a public interest that has priority over the health interests of the organ recipient. The principle of motive will

have to be invoked to forbid transplantation altogether if it is abused and is commercialized for individual benefit because the purpose will no longer be noble but selfish. Matters are to be judged by the underlying motive and not the outward appearances. Other considerations in transplantation are free informed consent, respect for the dignity of the human, ownership and sale of organs, *taharat* of the organs, *sadaqat* and *iithaar* of the organ donor.

Indications, side effects, and complications: The indications of transplantation are irreversible organ failure and sub-optimal organ function. Transplantation on the basis of preventive maintenance of organs in good condition is not allowed because the Law does not allow action based on uncertainty. The associated side effects and complications of immune suppression, infection, neoplasia, graft rejection, and drug toxicity are treated under 2 principles of the Law: hardship, *mashaqqa*, and injury, *dharar*.

3.4 Embryonic stem cell transplantation

Description of stem cells: A stem cell is able to divide and replicate itself almost indefinitely and can be grown to produce a more specialized or differentiated cell. Some stem cells are already differentiated or specialized and can be grown to produce only specific specialized cells. Other stem cells are less specialized or differentiated and can be grown into a wide range of specific cell types. These are called multi-potent or pluripotent cells. The third type of stem cells is called totipotent. These are completely undifferentiated and can be grown into any cell type.

Sources of stem cells: Multipotent cells can be found in adult blood, adult bone marrow, and umbilical blood. They can also be derived from cancer tissues and from fetal cells and embryonic cells (either pre-implantation or post-implantation). Embryonic stem cells are totipotent. They are able to develop into any type of body cell or tissue. The nucleus of the stem cell can be removed and can be replaced by the nucleus of a patient who has a damaged tissue. The cell can grow into the

desired tissue. Embryonic stem cells are more efficient than adult stem cells.

Diseases likely to be treated using embryonic stem cells:

The following serious medical conditions are candidates for cure using stem cells: diabetes, stroke, spinal cord injury, and neurodegenerative disorders such as Parkinson's disease. Stem cells could be grafted at a site of spinal cord injury. Stem cells grafted in the pancreas could produce insulin that is deficient or lacking in diabetics.

Advantages of stem cells: Stem cells have two main advantages. They can be a source of tissue or organs thus helping overcome the shortage of organs for transplantation. Stem cells generated under the patient's own genetic control will be fully immunologically compatible unlike donated organs that can be rejected by the patient.

Ethical controversy about embryonic stem cells: The use of adult stem cells or cells from the umbilical cord raises few ethical controversies. Embryonic stem cells, unlike adult stem cells, are a source of ethical controversy because they are obtained from embryonic tissue, either pre-implantation or post-implantation. Use of such tissue involves violation of the purpose of preserving life. Since the cell is a potential human life its use in research or transplantation involves denial of that life.

3.5 Cosmetic and reconstructive surgery

The concept of change of Allah's creation: The Qur'an mentions stability of creation (30:30) and stability of Allah's laws (35:43). The unchanging creation mentioned is constancy of the laws that govern the universe, *sunan*, as expounded in the Qur'an (35:43). Change is allowed if it follows the Laws. Any changes that do not follow these laws are repudiated. Desire to undertake reconstructive or cosmetic surgery arises out of dissatisfaction with defects and the associated embarrassing appearance. The defects are due to injuries that according to the principle of injury must be removed. Thus technology to remove or correct defects is not opposing or denying Allah's creation. A serious issue of *'aqidat* would

arise if a human were to be dissatisfied with Allah's primary creation because it is optimal and perfect. Humans cannot conceptualize a better creation that they then prefer. Deliberate effort to change Allah's primary creation without valid reasons is due to *shaitan*. There is risk in tampering with *fitra* without following the *sunan*.

Beautification: Allah made humans in a perfect image. He however also allowed them to enhance their physical appearance by wearing clothes, using perfumes. These measures improve appearance do not change *fitra*. Humans in disobedience undertake other forms of beautification that change basic *fitra* or do not follow the *sunan*. Prohibited procedures are tattooing, shortening teeth, widening gaps between teeth, and plucking eyebrows. Circumcision is an allowed procedure although it involves change of *fitra*. Male circumcision is *mustahabb* and is recommended on hygienic grounds. Opinions differ about female circumcision. Fraudulent procedures that are prohibited are wearing wigs, dyeing hair to hide age, and hymenal reconstruction. There are other forms of beautification. Increasing body weight and changing body shape by dieting is common and was practiced by women at the time of the prophet without objection.

Reconstructive/restorative surgery: Reconstructive/restorative surgery is carried out to correct natural deformities, deformities due to disease, and deformities due to complications of disease treatment. Malformations may be congenital or acquired. The distinction is not important because many of the congenital malformations are due to environmental factors operating *in utero*. The purposes of surgery on congenital malformations are: restoration of the normal appearance to relieve psychological pressure or embarrassment and restore function. These purposes do not involve change of *fitra* but restoration of *fitra* to its state before the injury. Similarly restorative surgery for deformities due to disease or treatment do not involve change of *fitra* since they are returning to the normal. Surgery for hiding identity of a witness is allowed. A surgical operation to reveal the true gender of an apparent hermaphrodite is not change of *fitra* but

an attempt to restore *fitra* altered by hormonal or chromosomal damage. Such operations have another objective of trying to preserve or restore the reproductive function.

Cosmetic surgery: Cosmetic surgery has a sole purpose of enhancing beauty with no medical or surgical indication. It can fulfill the purpose of preserving progeny, *hifdh al nasl*, if carried out for beautification in order to find a marriage partner. Expensive cosmetic surgery violates the purpose of preserving wealth, *hifdh al maal*. It violated the principle of preservation of religion, *hifdh al ddiin*, if carried out with the belief that Allah's creation was ugly. Under the principle of motive, *qai'dat al qasd*, we look at each individual case of cosmetic surgery and judge it based on the intention. As mentioned above a simple cosmetic surgery operation may lead to the noble purpose of marriage. We however must consider the benefits of cosmetic surgery against its harm under the principle of injury. The Law gives priority to prevention of injury over accruing a benefit. The principle of hardship cannot be applied to cosmetic surgery because there is no life-threatening situation necessity to justify putting aside normal prohibitions. Pursuit of beauty is not necessary for life and good health. Beauty is in any case a nebulous intangible entity that is very subjective.

4.0 Issues after Death

4.1 Embalming

Definition: Embalming is treating a dead corpse with substances that prevent it from decay or decomposition. Embalming does not prevent but delays the decomposition process.

The embalming procedure: In arterial embalming blood is drained through a vein and is replaced by a preservative fluid injected through the arteries. Cavity embalming involves removing fluid from body cavities using a trochar and replacing it with a preservative. Hypodermic embalming involves injecting preservatives under the skin. The fluid used is usually a mixture consisting of formalin and other substances. Arterial embalming is not permanent and repeat

treatments are required to maintain the body in an embalmed state.

Embalming and the purposes of the Law: Embalming does not fulfill any of the 5 purposes of the Law. It on the other hand violates the 5th purpose of preserving wealth, *hifdh al maal*, because it is an expensive procedure that consumes wealth. It also leads to violation of the hadith of the prophet about hastening the funeral, *al ta'ajil bi al janazat*ⁱ. Embalming a body that died of a communicable disease carries a risk to the funeral attendants and the community which would violate the second purpose of preserving life, *hifdh al nafs*. The prudent measure in cases of death from contagious disease is immediate burial.

Exceptional situations: In an exception to the general rule, embalming could be a better alternative in a situation in which a person dies in a foreign place with no Muslims knowledgeable or willing to give him an Islamic burial. It may be better in such a case to embalm the body and transport it to where it can get a decent and honorable Islamic burial. Proper burial including *salat al janazat* is one of the 5 cardinal duties of brotherhood in Islam. As many persons as possible should participate in *salat al janazat* because if 100 persons pray for the dead, the sins may be forgiven by Allahⁱⁱ. Embalming could also be considered in a situation in which a Muslim dies or is killed in hostile territory and it is feared that if the body is not transported to a Muslim land, it will be dishonored by the enemies.

4.2 Cryonics

Definition: Cryonics is cryopreservation of the body by cooling it immediately to the temperature of liquid nitrogen after death and keeping it at a low temperature. In some cases only the brain is removed and is cryopreserved because it contains the essential information. The whole practice of cryonics is based on a speculation that future scientific discoveries will be able to reverse death. The practice of cryonics is based on the hope that one day medical technology will be able to reverse the death process so that the clinically

dead can come back to life. According to its advocates, cryonics does not involve denial of death, *nafiyu al mawt*, or denial of resurrection, *nafiyu al ba'ath*, because its advocates think that clinical death is not terminal death but is a process that can be reversed. The advocates of cryonics do not consider the preserved bodies as dead and they call them patients.

Procedures: Immediately after death the body is infused with glycerol (a cryoprotectant fluid) and is then cooled to a very low temperature. The fluid prevents formation of ice crystals that could damage cells. The body is kept at the low temperature indefinitely.

Cryonics and purposes of the Law: Cryonics is repugnant to the Law because it involves waste of resources, a violation of the 5th Purpose of the Law. 'Patients' as the cryopreserved bodies are referred to have to set aside large sums of money as investments such that the returns on the investment can cover the annual costs of cryopreservation for an indefinite period of time.

Speculative thought, *dhann*: The other aspect of cryonics that is repugnant to the Law is the speculative thought, *dhann*, that science will one day develop a method of reversing clinical death. According to the principle of certainty, *qa'idat al yaqeen*, the Law requires decisions based on actual realities and not speculative or hypothetical conjectures. Advocates of cryonics have been arguing that the cryopreservation would be more effective if started before the point at which clinical death is legally recognized. If this were to be put in practice, the Law would recognize occurrence of a criminal act of murder.

Definition and timeline of death: An outstanding ethico-legal issue relating to cryonics is definition of death and determining the point in time at which death is said to occur. This is because death is a process and not an isolated event. Depending on the definitional criteria used, there are several points on the time line of the death process than could be considered the point of death. Definition of legal death is based on the legal principle of precedent or custom, *qa'idat al 'urf* or *qa'idat al 'aadat*. The customary definition changes with

changes of knowledge and available medical technology. Therefore cryonic procedures carried out after the point considered legal death are repugnant to the Law because they involve denial of death or attempting to artificially prolong life.

Cooling the body before clinical death: Another outstanding issue that deserves further discussion is cooling the body to lower metabolism and decrease tissue damage in a patient who is not yet clinically or terminally dead.

Cryonics and violation of 'aqidat: The most serious consideration in cryonics relates to 'aqidat. A person without the correct 'aqidat does not believe in life in the hereafter and wants to achieve immortality on earth and is therefore wont to turn to cryonics. Cryonics seen from such a perspective should be prohibited absolutely. The relevant Islamic teachings on death are very clear and leave no room for doubts about the prohibition of cryonics. We summarize these teachings for re-emphasis below.

4.3 Autopsy

Definition: The term autopsy or necropsy is used to refer to dissection and examination of a dead body to determine the cause(s) of death. It may be carried out for legal or for educational purposes.

Purposes of autopsy: Post-mortem examination serves several purposes. It can be done for scientific research to understand the natural history, complications, and treatment of a disease condition. It can be done for further education of physicians and medical students especially when they compare their clinical diagnosis with the evidence from autopsy a process usually referred to as clinico-pathological correlation. The lessons learned will improve their diagnostic and treatment skills in the future and decrease the incidence of clinical mistakes. Post mortems are also undertaken for forensic purposes to provide evidence on the timing, manner, and cause of death. Legally the courts may require scientific proof of the cause of death in order to make decisions regarding various forms of legal liability.

The procedure of the autopsy: The first step in an autopsy is examination of the exterior of the body. Then the body cavity is opened to examine the internal organs. Organs may be removed for examination or may be examined *in situ*. After the examination removed organs are returned and the external incision is sewed up restoring the body to almost its original appearance with the sole exception of having an incision. During the examination tissues and fluids are removed for further examination that may include histological, microbiological, or serological procedures.

Permissibility of autopsy for educational purposes under the principle of necessity, *qa'idat dharuurat* : Dissection of cadavers has been very important for medical education over the past decades when there was really no alternatives to dissection. Cadaver dissection was therefore permissible under the legal principle of necessity, *dharuurat*. The reasoning is that cadaver dissection enables future doctors to be trained well to treat patients which fulfils the second purpose of the Law, preservation of life or *hifdh al nafs*. The situation of necessity explained above takes precedence over considerations of violating human dignity by dissecting the body under the general principle of the Law that necessities legalize what would otherwise be prohibited, *al dharuuraat tubiihu al mahdhuuraat*. However this can only be carried out if there is informed consent from the family members who have the authority to consent as prescribed by the Law. As far as possible this consent should take into consideration the will of the deceased on this matter if it was known before death. However human dignity cannot be violated more than necessary. The body should still be handled with respect and consideration. All tissues cut away should be buried properly and the remaining skeleton should also be buried in a respectful way.

Alternative ways of achieving the educational objectives of autopsy : The following arguments cast doubt on the degree of necessity for cadaver dissection in medical education. The cadaver is treated before dissection and does not truly represent the structure or appearance of tissues in a living person.

Secondly with availability of computer graphics and anatomical models, medical students can learn human anatomy very conveniently and more efficiently. The necessity of educational autopsies can be reduced by modern endoscopic and imaging technology that can enable inspecting internal structures of a corpse without the making an incision to inspect internal tissues. If the educational objective can be achieved fully using such technology then the rationale for the necessity will disappear and educational autopsies will be considered repugnant to the Law.

Ethico-legal issues in autopsy for legal or forensic purposes: The necessity of a forensic post-mortem is based on the paramount paradigm of Islamic Law to ensure justice. If the only way evidence about a crime on a deceased is by an autopsy then it becomes a necessity to carry out the autopsy. A forensic or medico-legal autopsy is more detailed in that it tries to look for clues to the motivation and method of death. It is equally important to record some findings as it is to record negative findings. The deceased should be identified accurately. Documentation is very thorough. The time of death must be estimated. The postmortem record is a legal document that can be produced in a court of law.

4.4 Research on dead corpse

There are several types of research on the recently dead that can be permitted under the principle of necessity if they will result in better health care that fulfills the second purpose of the Law, preservation of life or *hifdh al nafs*. Forensic pathologists may carry out research to study the process of decomposition of the body. They then can use that information to estimate time since death in cases of criminal homicide.

5.0 Ethico-Legal Issues In Research

5.1 Research on Humans

Purposes of the law in human experimentation: The Islamic ethical theory on research is based on the 5 purposes of the Law, *maqasid al shari'at*, religion, life, progeny, the mind, and wealth. If any of the 5 necessities is at risk permission is given

to undertake human experiments that would otherwise be legally prohibited. Therapeutic research fulfills the purpose of protecting health and life. Infertility research fulfills the purpose of protecting progeny. Psychiatric research fulfills the purpose of protecting the mind. The search for cheaper treatments fulfills the purpose of protecting wealth.

Principles of the law in human experimentation: The 5 principles of the Law guide research. Research is judged by its underlying and not expressed intentions. Research is prohibited if certainty exists about beneficial existing treatment. Research is allowed if benefit outweighs the risk or if public interest outweighs individual interest. If the risk is equal to the benefit, prevention of an injury has priority over pursuit of a benefit of equal worth. The Law chooses the lesser of the two evils, injury due to disease or risk of experimentation. The principle of custom is used to define standards of good clinical practice as what the majority of reasonable physicians consider as reasonable. Under the doctrine of *istishaab*, an existing treatment is continued until there is evidence to the contrary. Under the doctrine of *istihsaan* a physician can ignore results of a new experiment because of some inclination in his mind. Under the doctrine of *istislaah* preventing an injury has priority over obtaining a benefit.

Informed consent: Informed consent by a legally competent research subject is mandatory. Informed consent does not legalize risky non-therapeutic research with no potential benefit. It is illegal to force participation of the weak (prisoners, children, the ignorant, mentally incapacitated, and the poor) in clinical trials even if they sign informed consent forms.

Outstanding ethico-legal issues: Research on fetal human tissues may encourage abortion. Cadaver dissection and post mortem examination are permitted under necessity. Use of human bodies in auto crash experiments violates human dignity. Genetic experiments may cause diseases hitherto unknown. The Law allows research on ageing as long as the

aim is not prolongation of life or preventing death because those aspects are under Allah's control.

5.2 Research on animals

Enjoining kindness to animals: The prophet enjoined kindness to animals. Saving animals from danger is a noble act. There is reward for kindness to animals.

Prohibiting cruelty to animals: Cruelty and physical abuse of animals are prohibited. There is severe punishment reserved for cruel treatment of animals. Face branding, beating, cursing, sexual abuse, and wanton killing of animals were forbidden.

Animal research: purpose and relevance: The purpose of animal research is to spare humans from risk. Findings in animals are relevant to humans because of similarities in physiology and biochemistry. However findings in animals cannot be directly transferred to humans; research on humans is still necessary for a definitive conclusion. Animal research is exploratory and not definitive.

The Law and animal experimentation: The position of the Law is that animal experiments are allowed if a *prima facie* case can be established that the result of the research is a necessity, *dharuurat*. *Dharuurat* under the Law is what is necessary for human life. The regulations of necessity require that no more than the absolute minimum necessary should be done, *al dharurat tuqaddar bi qadiriha*. Animal research has definite risks for the animals that are not balanced by any benefits: pain, suffering, permanent injury, inhumane treatment and operations, and being killed (sacrificed). Thus use of animals is justifiable on the basis of *taskhiir* and not any benefits that accrue to the animals. The risks to humans from animal research are minimal in the short term; long-term effects are difficult to fathom. The purposes and principles of the Law can be used to analyze all legal aspects of animal experimentation.

Outstanding ethico-legal issues: There are limits to *taskhiir*. Humans were not given a *carte blanche* to exploit animals in any way they liked. They have to conform to the Law and

moral guidelines. If the results of animal experimentation will lead to protection of human life, then research is allowed to proceed because then it is a necessity. This is similar to killing animals for food, a necessity for human life. If research is for general scientific curiosity unrelated to any tangible human benefit, then it is beyond the authorization of *taskhiir*. There are differences among animals. Animals considered dangerous and must be killed. Use of such animals for research should therefore raise fewer ethical objections than other animals. All types of animals used in research cannot be subjected to unnecessary pain and suffering. Animals whose flesh is edible are preferably used in research. Use of animals that are *haram* like the pig should be avoided as much as possible and should be considered only in cases of *dharuurat*. Animals, like humans, have rights to enjoyment of life and good health. The researcher must therefore follow Islamic etiquette to minimize animal suffering. The *basmalah* is said at the start of an animal experiment, similar to slaughter of animals for food, in recognition of the fact that the experiment is carried out with the permission of the creator under the requirements of *taskhiir*. The animals must be shown kindness and respect. They should not be subjected to the psychological pain of seeing other animals in pain or being sacrificed. Pain must be minimized both during the experiment and when the animal is being terminally sacrificed. This is based on the legal requirement of slaughtering animals using a sharp knife and as quickly as possible to prevent pain and suffering. The long-term effects of the experiment on the animal must be considered and efforts made to decrease suffering and pain. The nutritional and medical needs of the animal must be taken care of before, during, and after the research.

i (Bukhari K23 B51)

ii (Muslim K11 H58)

The Approach of the Qur'an and Sunnah in Medicine: Challenges and Practices in the Era of Globalization¹

Abstract

Islamic Medicine is defined as medicine whose basic paradigms, concepts, values, and procedures conform to or to do not contradict the Qur'an and Sunnah. It is characterized by being value-based, by being holistic under the tauhidic paradigm, and by conforming to the 5 purposes of the Law, maqasid al shari'at. The Qur'an and sunnat have guidelines for the treatment and cure of diseases. The appeal of the concept of Islamic medicine is set to grow phenomenally in the next 20 years. This growth will be driven by two main forces: defining Islamic alternatives in many fields of endeavor and general dissatisfaction with modern scientific medicine because of over-emphasis of technology over the human dimension. The Islamic approach to medicine has reintroduced the human element in medicine without denying the benefits of modern medical technology. Islamic hospitals and Islamic faculties of medicine are being built. The Islamic health care industry is expected to experience phenomenal growth. The strict and exclusive monotheism of Islam is a basis for a global perspective in medicine and will help make Islamic medicine a global player not limited by geography or ethnicity.

1.0 The Islamic Medicine Movement

1.1 Definition of Islamic medicine as paradigms and values

Islamic Medicine is defined as medicine whose basic paradigms, concepts, values, and procedures conform to or to do not contradict the Qur'an and Sunnah. It is not specific

1 Ibn Sina keynote address at the Faculty of Medicine Universiti Malaya at the 4th Universiti Malaya Medical Center Conference on Medicine from the Islamic Perspective held at the Saujana Subang Malaysia on 24th March 2007

medical procedures or therapeutic agents used in a particular place or a particular time. Islamic Medicine is universal, all-embracing, flexible, and allows for growth and development of various methods of investigating and treating diseases within the frame-work described above. Islamic Medicine thus becomes the result of an Islamic critique and reformulation of the basic paradigms, research methodology, teaching, and practice of medicine. This process of conceptual transformation is called Islamization of Medicine. The end-result of the Islamization process will not be a medical system for Muslims only but for the whole humanity because Islam is a set of universal and objective values. Islamization is not theologizing, localizing or parochializing medicine but making it objective, universal, value-based, and excellent for all.

1.2 Impact of Islamic Medicine

The above-mentioned understanding of Islamic medicine is gradually changing the practice of medicine in the *ummat*. Islamic hospitals and clinics are being established in many Muslim and non-Muslim countries. There is increasing research inspired by the Islamic medicine movement. Medical faculties are being established on the same philosophy. In years to come, Muslim physicians will be able to make a marked impact on mainstream medical practice by introducing Islamic values to it.

1.3 The motivation behind Islamic Medicine: conceptual and moral problems

European¹ medicine has some paradigms that we do not accept as Muslims. Death is rejected as a natural phenomenon and resources are wasted in terminal illnesses. Aging is also not accepted as a normal process. There is no consideration of balance and equilibrium in selecting treatment modalities with the result that an unacceptably high number of patients are being treated for side effects of modern therapeutic agents. Too much narrow specialization leads to lack of a holistic approach to the patient. The physician behaves as a technician turns a

blind eye to moral and social issue of the day that affect the health of his patients and claims that his responsibility is medical care only. Secularized medicine has no consistent set of ethics leading to malpractice, fraud, and bias in research. Accepting only empirical knowledge and negating other sources of knowledge had also created new problems. By denying a religious and moral dimension, European medicine operates in a presumed moral vacuum. It is a gross mistake to attempt to solve social and medical problems of a moral or spiritual nature by use of technology.

2.0 Tauhid As The Basis For A Global Outlook In Medicine

2.1 Basic tenets of *'aqidat al tauhid*

Islam is strictly and exclusively monotheistic. Judaism is also monotheistic but in practice negates monotheistic universality by being an ethnic faith. Christianity has a qualified monotheism. That leaves Islam with absolute monotheism that translates directly into universal social behavior and social organization. The essence of monotheism, *tauhid*, is the oneness of the creator, *wahdaniyyat al llaah*². Belief in the one-ness of the Creator-God, *tauhid al rububiyyat*, explains the harmony and coordination in the universe created by one God. *Tauhid al uluhiyyat* implies worship of one God alone. Worship of only one God implies following the Creator's physical and social laws that make life on earth successful.

2.2 Implications of *tauhid*

Tauhid encapsulates the Islamic world-view, *al tasawwur al islami*, and is the basis of Islamic culture and civilization. It provides an integrating framework for the whole universe in whose absence there would be irreconcilable contradictions. It is the basis for consistent and uniform physical and social laws that govern science, technology and society. *Tauhid* explains the unity and brotherhood of mankind because of a common origin³. The differences of nations and tribes have the purpose of mutual identification⁴ and do not negate the common human brotherhood.

The equilibrium between benefit and harm of treatment modalities should be looked at using three Islamic principles: *tauhid*, *wasatiyyat*, & *shumuliyyat*.

The concept of *tauhid* motivates looking at the patient, the disease, and the environment as one system that is in equilibrium; thus all factors that are involved with the three elements are considered while making decisions.

Tauhid also motivates looking at a patient as one organism and not a convenient combination of organs and pathologies. The patient has physical, social, psychological, and spiritual dimensions that have to be considered together in an integrated and holistic fashion.

The concept of *wastiyyat* motivates the need for moderation and not doing anything in excess. The concept of *shumiliyyat* extends the *tauhidi* principle by requiring an overall comprehensive bird's view of the disease and treatment situation.

3.0 Purposes Of The Law As The Ethico-Legal Basis Of Medicine

3.1 The Theory of *maqasid al shari'at*

Islamic Law has 5 main purposes. Ethical practice of medicine fulfills and does not contradict those purposes. They are: protection of life, *hifdh al ddiin*; protection of life, *hifdh al nafs*; protection of progeny, *hifdh al nasl*; protection of the intellect, *hifdh al 'aql*; and protection of wealth, *hifdh al maal*.

3.2 Protection of *ddiin*, *hifdh al ddiin*

Protection of *ddiin* essentially involves '*ibadat* in the wide sense that every human endeavor is a form of '*ibadat*. Thus medical treatment makes a direct contribution to '*ibadat* by protecting and promoting good health so that the worshipper will have the energy to undertake all the responsibilities of '*ibadat*. The principal forms of physical '*ibadat* are the pillars of Islam: prayer, *salat*; fasting, *siyaam*; and pilgrimage. A sick or a weak body can perform none of them properly. Balanced mental health is necessary for understanding '*aqidat* and avoiding false ideas that violate '*aqidat*.

3.3 Protection of life, *hifdh al nafs*

The primary purpose of medicine is to fulfill the second purpose of the *shari'at*, the preservation of life, *hifdh al nafs*. Medicine cannot prevent or postpone death since such matters are in the hands of Allah alone. It however tries to maintain as high a quality of life until the appointed time of death arrives. Medicine contributes to the preservation and continuation of life by making sure that the nutritional functions are well maintained. Medical knowledge is used in the prevention of disease that impairs human health. Disease treatment and rehabilitation lead to better quality health.

3.4 Protection of progeny, *hifdh al nasl*

Medicine contributes to the fulfillment of this function by making sure that children are cared for well so that they grow into healthy adults who can bear children. Treatment of infertility ensures successful child bearing. The care for the pregnant woman, peri-natal medicine, and pediatric medicine all ensure that children are born and grow healthy. Intra-partum care, infant and child care ensure survival of healthy children.

3.5 Protection of the mind, *hifdh al 'aql*

Medical treatment plays a very important role in protection of the mind. Treatment of physical illnesses removes stress that affects the mental state. Treatment of neuroses and psychoses restores intellectual and emotional functions. Medical treatment of alcohol and drug abuse prevents deterioration of the intellect.

3.6 Protection of wealth, *hifdh al mal*

The wealth of any community depends on the productive activities of its healthy citizens. Medicine contributes to wealth generation by prevention of disease, promotion of health, and treatment of any diseases and their sequelae. Communities with general poor health are less productive than healthy vibrant communities.

4.0 Medical Guidelines In The Qur'an And Sunnah

4.1 Qur'anic medicine

The Qur'an is a book of moral guidance that provides general principles that guide the development of knowledge in various disciplines. It therefore does not go into details about disease. The Qur'an is itself a cure⁵. Honey is described in the Qur'an as a cure⁶. The Qur'an described disease in prophet Ayyub (PBUH) and its eventual cure⁷. The Qur'an describes how Isa cured chronic diseases⁸. Humans try, but it is Allah who cures, *allah huwa al shafi*⁹.

4.2 Prophetic medicine

We find more details about medicine in the hadiths of the Prophet. Bukhari in his Sahih narrated 129 hadiths directly related to medicine. He devoted two books to medicine: *kitaab al tibb* and *kitaab al mardha*. There are many other hadiths in Bukhari indirectly related to medicine. Other books of hadith also narrate more hadiths with relevance to medicine. Scholars have collected these hadiths together and some have related them to available medical knowledge. Among these authors are: Abu Nu'aim (d. 430 AH), Ibn Qayyim al Jawziyat (d. 751 AH), and Jalaluddin al Suyuti (d. 911 AH). There are also more recent writings as articles and books.

The prophet Muhammad (PBUH) said in an authentic hadith that Allah did not reveal any disease, *bau*, without also revealing its cure, *dawau*¹⁰. Humans are encouraged to seek treatment, *al hatthu 'ala al dawaa*¹¹. Some people may know the cure and others may ignore it but it nevertheless exists. Most of *tibb nabawi* is preventive medicine which is a very advanced concept given the level of scientific knowledge at the prophet's time and certainly must have been divinely inspired. Al Suyuti listed preventive medical measures such as food and exercise. Other preventive measures taught in hadith include: quarantine for epidemics, *hijr sihhi*, forbidding urination in stagnant water, *bawl fi mai raqid*, use of tooth stick, *siwaak*, precautions in the house at night to prevent fire and pests, and leaving a country because of its water and climate.

Study of *tibb nabawi* reveals that there are spiritual aspects of healing and recovery. Prayer, *dua*, recitation of the Qur'an, and remembrance of Allah play a central role. Psychosomatic diseases could respond to spiritual approaches. Curative medicine involved prophetic teachings about treatment of wounds, use of honey and the black seed for several ailments. The use of *ruqyat* (*surat al fatiha*, *al mu'awadhatain*) falls between physical curative and spiritual. The curative part of *ruqyat* can be understood in modern terms in the way the psyche can modulate immune mechanisms that protect against disease.

In his book, *A Tibb al Nabawi*, Imaam Ibn al Qayim mentions many medical conditions for which the Prophet provided guidance. He interpreted the hadiths using the available medical knowledge of his day. This book needs rewriting and it will look very different if written interpreting the prophetic traditions using today's medical knowledge. Diseases in *tibb nabawi* treatable by natural remedies were listed as: fever, *humma*; bowel movements, *istitlaq al batan*;, dropsy, *istisqa*;, wounds, *jarh*; epilepsy, *sar'a*;, sciatica, *'irq al nisa*;, temperaments, *tabau'*;, skin itch, *hakk al jism*;, pleurisy, *dhaat al janb*;, headache and hemicrania, *sidau and shaqiiqat*;, inflammation of the throat, *'adhrat*;, enlargement of the heart, *al maf'uud*;, ophthalmia, *al ramad*;, catalepsy, *khudran al kulli*;, pimples, *bathrat*;, skin eruptions, *awraam*; food poisoning, *sum*;, witchcraft, *sahr*;, and head lice.

Ibn al Qayyim also mentioned other diseases like: plague, leprosy, eye diseases, throat and tonsils, diarrhea, abdominal disease, fever, plague, snake bite, scorpion bite, food contamination by a fly, headache, nose bleeds, teeth, cough, dropsy, sprain, fracture, bite by rabid dog, and the evil eye.

4.3 Spiritual modalities of treatment

Among spiritual approaches to disease management is use of *dua* from the Qur'an¹² and hadith as *ruqiy*. *Dua* was reported to have been used for madness, *dua min al junoon*¹³ and for fever¹⁴. The formulas for *ruqy* reported from the prophet, *al*

ruqiy al ma'athuur, consist of the following chapters of the Qur'an: *al fatihat*, *al falaq*, *al naas*, *ayat al kursi*, and the various supplications reported from the prophet, *dua ma'athurat*. The Qur'an is the best medicine¹⁵. *Dua* is medicine¹⁶. Asking for protection from Allah, *isti'adhat*, is medicine. A strong *iman* and trust in Allah, *tawakkul*, play a role in the cure of diseases. *Salat* is a cure¹⁷. The spiritual approach to cure is mediated through the physical processes. Psychosomatic processes affect the immune functions and other metabolic functions of the body. A believer who is spiritually calm will have positive psychosomatic experiences and not negative ones because he or she will be psychologically healthy and at ease. Faith can change the very perception of disease symptoms. Pain is for example subjective. A believing person who trusts in Allah may feel less pain from an injury than a non-believer with the same injury.

4.4 Physical modalities of disease treatment

Ibn al Qayyim mentioned three therapeutic modalities used in Prophetic medicine: natural, spiritual, mixture of natural and spiritual. The physical treatments mentioned were honey, *al 'asal*; cold water for fever, *al mau al barid*;, diet, *ghadha*;, milk, *al laban*;, camel milk, camel urine, cupping, *al hijaam*;, cauterization, *al kayy*;, venesection with cauterization, *qati'u al uruuq wa al kayy*;. The black seed, *al habba al sauda*, was especially emphasized.

Among physical approaches to disease management are: diet, natural agents (chemical, animal and plant products), manufactured chemical agents, surgery, *jiraha*, and physical treatment e.g. heat. Physical approaches can reverse disease pathology, mitigate its effects or just stop farther progression. All therapeutic agents and procedures are allowed unless they contravene a specific provision of the Law. This provides a wide scope for the practice of medicine. Bad medicine is forbidden¹⁸. Bad medicine causes more harm than benefit. While seeking treatment, the moral teachings of Islam must be respected. The end never justifies the means. *Haram* material is

not allowed as medicine except in special circumstances where the legal principle of necessity, *dharurat*, applies. Alcohol is for example not an accepted cure for any disease; it is actually itself a disease.

Harmful treatments are not allowed in situations in which the cure is worse than the disease. Choice of what treatment modality to use should involve a careful weighing of benefits and possible harm or injury. It is a principal of Islamic Law, *sharia*, to give priority to preventing harm over accruing a benefit.

Evil people use pharmacological agents for bad and selfish reasons for example in altering people's minds to deliberately cause harm.

4.5 Prohibition of *shirk* in seeking cure

Shirk arises when humans seek and expect cure of disease from anything other than Allah. Manifestations of *shirk* practices in disease treatment include: amulets, *tamaim*; divinations, *kahanah*; and worshipping or asking cure from humans called saints, *awliyaa*, by visiting their graves. Other superstitious practices usually associated with *shirk* are: claiming knowledge of the unseen and claiming supernatural powers by any human. Many people with disease conditions resort to *shirk* practices due to misguidance by *shaitan*. These practices nullify '*aqidat al tauhid*' because they attribute disease and its cure to other than Allah. They also distract from seeking true treatment based on rational scientific medicine. Patients delay coming to hospital and by the time they come the disease is too advanced for easy cure.

Involvement of jinn and shaitan: *Jinn* possess power that is used to misguide and give credibility to *shirk* and superstition. The jinn do not know the unseen¹⁹. A good Muslim should not be involved with *jinn*s and should ask Allah for protection against them²⁰.

A **fortuneteller**, *kahin*, is a liar who pretends to know the future or the unseen and provides information to the gullible

clients. The prophet forbade consulting fortunetellers, *al nahyu 'an hawlaan al kaahin, al nahyu 'an istishaarat al kaahin*²¹. Fortunetellers are able to convince their clients about supernatural knowledge because of assistance by *shaitan* that listens to people's secrets and informs the fortuneteller, *istishraaq al shaitan al sama'u*²².

Astrology, *tanjim*, is the belief that movement of planets, stars, the sun, and the moon can affect peoples' lives. The astrologer uses these phenomena to make predictions about disease or its cure. The astrologer, *munajjim*, is a liar because he or she is trying to appropriate Allah's prerogative of knowing the unseen, *ghaib*. Astrology was forbidden by Islam, *al nahyu 'an al tanjiim*²³.

Divination, *tatayyur* was mentioned in the Qur'an²⁴. Divination is foretelling the future using several techniques such as horoscopes, astrology, geomancy (use of figures or lines), crystal gazing, possession by a spirit that answers specific questions, pyromancy (divination by fire), hydromancy (divination by water), cleromancy (divination by lots), somatomancy (divination based on body appearance), phenology (divination by features of the head), and oneiromancy (interpretation of dreams). Augury is divination of the future by observation of natural phenomena in plants, animals, or inanimate objects to see omens (divinatory signs). What is surprising is that spread of modern science based on empiricism has not done away with the superstition of divination. It is also surprising that those who consult diviners do not test the predictions of the diviners but just believe them or ignore them and never reach the conclusion that diviners do not know or just guess.

Amulets / talisman are objects thought to bring good fortune or to prevent disease. They may be natural or man-made. They may be of plant or animal origin. Some are made of stone or metals. They are thought to have magical powers. Talismans are forms of shirk, *al tamaim shirk*²⁵ and it is offensive to carry them, *karahiyat haml al tamaim*²⁶. There is no difference in prohibition between talismans from the Qur'an and those from

other sources. There are people who hang amulets, *azlaam*, on their body for protection instead of relying on Allah²⁷. Such actions are very demeaning to humans. How can a human who possesses an intellect rely for protection on a small object that he manufactures himself and hangs around his neck?

4.6 Medicine and pre-determination, *qadar*

Disease treatment is part of *qadar*²⁸. Seeking treatment does not contradict *qadar* or *tawakkul*. Disease treatment is part of *qadr*. The principle that applies here is reversal of *qadar* by another *qadar*, *rad al qadr bi al qadr*. Disease could be prevented before occurrence or could be treated after occurrence. The concept of prevention, *wiqayat*, does not involve claiming to know the future or the unseen, *ghaib*, or even trying to reverse *qadar*. The human using limited human knowledge attempts to extrapolate from the present situation and anticipates certain disease conditions for which preventive measures can be taken. Only Allah knows for sure whether the diseases will occur or not. The human uses knowledge of risk factors for particular diseases established empirically to predict disease risk. Preventive action usually involves alleviation or reversal of those risk factors. For example stopping cigarette smoking can prevent lung cancer and ischemic heart disease. Obeying fire regulations can prevent fire accidents. Careful driving prevents road traffic accidents and trauma. Immunization prevents viral and bacterial infections.

5.0 The Islamic Health Industry: Prospects And Challenges

5.1 The Islamic Medicine alternative

The appeal of the concept of Islamic medicine is set to grow phenomenally in the next 20 years. This growth will be driven by two main forces. The first one is the general process of defining Islamic alternatives in many fields of endeavor. For example Islamic banking has expanded to all countries of the world being recognized and catered for by the Bank of England and virtually all banking giants that are not in any way describable as Muslims. Many of these banks have set up special accounts and special windows to handle Islamic

banking and the industry is worth billions with the prospect it shall soon be worth trillions.

5.2 Dissatisfaction

The second driver is the general dissatisfaction with modern scientific medicine. This dissatisfaction is evidenced by the phenomenal growth of alternative traditional of complementary (TCM) medicine. The disadvantage of the TCM movement has been denying a large number of patients the powerful curative modalities of scientific medicine. People turn away from scientific medicine not because of its technology but because of its lack of a human dimension. The growing popularity of Islamic medicine is that it has reintroduced the human element in medical practice without missing out on the benefits of modern medical technology. This popularity is witnessed by building of Islamic hospitals in many parts of the world. The medicine practiced in these hospitals is as modern as is found in the best medical centers in New York and London but has the added value of a human dimension that gives patients so much satisfaction. It is for these reasons that we have included some elements of Islamic medicine in the undergraduate medical curriculum to prepare our students to be players in an industry that is billed to grow phenomenally in subsequent years.

6.0 The Challenge Of Globalization

6.1 Lizard whole phenomenon

Prof Malik Badri talked about the Lizard Hole phenomenon based on the hadith of the prophet that Muslims in later times would follow non-Muslims like lizards follow one another into lizard holes²⁹. Creators of lizard holes want to retain intellectual leadership and initiative. They create new lizard holes so fast that they do not have enough new ideas for them. Old ideas have to be recycled and labeled as new ones using different terminology and words. Globalization is one of the lizard hole phenomena that is as old as human history but is being presented today as a new phenomenon and as an addition to the lizard holes that Muslims are being persuaded to enter. Since we know it is old and not new we should spent time examining it critically instead of just entering the lizard hole.

6.2 Globalization before the 15th century of *hijra*

Globalization is not new. The inhabited world has always been global. Humans created from Adam and Hawa have walked on their feet to far corners of the world where humans live today. The evidence for these wide-scale human movements is still preserved for us today. Physical anthropologists can trace the spread of humans by studying physical and genetic characteristics along the routes of migration. Cultural anthropologists can make similar studies using linguistic tools. Thus humans before and after history have been moving around and interacting with one another genetically, culturally, politically, religiously, and commercially.

6.3 Globalization in the 15th century of *hijra*

Globalization in the 15th century H differs from ancient globalization in having faster communication and movement. Ancient communication was 2-way with mutual influence on one another. Modern globalization is one-way transfer of information and culture from the industrialized countries to the less industrialized. Economically cheaply-priced raw materials flow from the less industrialized countries to the more industrialized while fewer economic benefits flowing in the opposite direction.

6.4 The future of globalization

The laissez-faire attitude to globalization will continue as long as it is comfortably one-way. When demographic, social, economic, and ideological trends start forcing a reversal of the flow of information, culture, ideology, and economic initiative in the opposite direction, industrialized countries will respond by curtailing or shutting down globalizing trends. The first victim of the shut-down will be the internet.

6.5 The challenge of globalization in medicine

Medical knowledge, skills, and technology flow from the industrialized countries. The less industrialized ones are consumers and not producers of medical knowledge. The challenge is to reverse this unhealthy trend by a vigorous research program to be producers of knowledge.

7.0 Ibn Sina and The Challenge Of Globalization

Ibn Sina in whose honor this lecture is being given lived at a time similar to our times. Greek knowledge and science were dominant. Ibn Sina studied all the available medical knowledge and went on to research and add onto that knowledge. He therefore exemplified the ideal we need today. He was a producer and not a consumer of knowledge.

Al Shaikh al Rais Abu Ali Al Hussain Bin Abdillah Bin al Hassan **Ibn Sina** (370-428 H / 980 – 1037 CE) wrote many books the most famous being al Qanuun fi al Tibb, a 14-volume encyclopedia on disease classification and causes, therapeutics, simple and compound medicines, hygiene, and functions of the body. The book was translated into Latin and had a major impact on western medicine being taught until the 18th century CE. Ibn Sina recognized that TB was contagious. He accurately described the symptoms of diabetes mellitus. He discovered ancylostoma. Besides medicine, Ibn Sina made contributions to science, mathematics, chemistry, and philosophy.

References :

- 1 The term European is used here to refer to a distinct culture and world-view based on Greco-Roman and Judeo-Christian traditions. It developed in Europe and was carried by European colonizers, settlers, and rulers all over the world. It is today the dominant culture on the world scene.
- 2 Qur'an 28:70
- 3 Qur'an 4:1
- 4 Qur'an 49:13
- 5 Qur'an 17:82
- 6 Qur'an 16:69, 3:49, 5:110, 9:14, 10:57, 10:69, 17:82, 26:80, 41:44
- 7 Qur'an 21:83-84, 38:41-44
- 8 Qur'an 3:49, 5:11
- 9 Qur'an 21:83-84, 26:80, 38:41-42
- 10 Bukhari K76 B1
- 11 Tirmidhi K26 B2
- 12 Qur'an 17:82
- 13 Ahmad 1:302

-
- 14 Tirmidhi K45 B36
 15 Ibn Majah K31 B28
 16 Ahmad 2:446
 17 Ibn Majah K31 B10
 18 Tirmidhi K26 B7
 19 Qur'an 15:17-18, 34:14, 37:6-10, 67:5, 72:8
 20 Qur'an 3:36, 7:200, 16:98, 114:1-6
 21 Muslim K39 H121
 22 Bukhari K59 B6
 23 Ibn Majah K23 B28
 24 Qur'an 7:131
 25 Abudaud K27 B17
 26 (KS142)
 27 Qur'an 5:3, 5:90
 28 Tirmidhi K26 B21
 29 *latatabi'anna sunan alladhiina min qablikum hadhwan al qatra bi al qatra hatta law dakhaluuhu juhra dhabbi ladakhaltumuuhu qaaluu al yahuudi wa al nasaar ya rassula al llaah? Qaala faman?.... Lata akhudha ummati bima akhadhat al umam qablaha shibran bi shibrin wa diraa'an bi dhiraa'in hatta law minhum man ata umahu 'alaniyyatan lakaana min ummati man ya ati ummahu 'alaniyyatan 'an abi sa'ied al khudhri : latatabi'anna sunan man kaana qablakum shibran bi shibrin wa dhiraa'an bi dhiraa'in hatta law salakuuhu juhra dhabbin lasalaktumuuhu. Qulna ya rasuul al llaah al yahuud wa al nasaara? Qaala faman?*

Knowledge '*Ilm*

Nature Of Knowledge, *tabi'at al ma'rifat*

Nature Of Knowledge

The Qur'anic terms for knowledge are: '*ilm, ma'arifat, hikmat, basiirat, ra'ay, dhann, yaqeen, tadhkirat, shu'ur, lubb, naba', burhan, dirayat, haqq, and tasawwur*. The terms for lack of knowledge are: *jahl, raib, shakk, dhann, and ghalabat al dhann*. Grades of knowledge are '*ilm al yaqeen, 'ayn al yaqeen, and haqq al yaqeen*. Knowledge is correlated with *iman, 'aql, qalb, and taqwah*. Knowledge must be evidence-based knowledge, *hujjiyat al burhan*. The seat of knowledge is the '*aql, and qalb*. Allah's knowledge is limitless but human knowledge is limited. Humans vary in knowledge. Knowledge is public property that cannot be hidden or monopolized. Humans, angels, jinn, and other living things have varying amounts of knowledge. Islamic epistemology, *nadhariyyat ma'rifiyyat Islamiyyat*, is Qur' an-based within the *tauhidi* paradigm and is guided by objectivity, *istiqamat*. Knowledge can be absolute for example revealed knowledge. Other types of knowledge are relative, *nisbiyat al haqiqat*. The probabilistic nature of knowledge arises out of limitations of human observation and interpretation of physical phenomena.

History Of Human Knowledge, *tarikh al ma'rifat al insaniyat*

Adam was the first human to learn actively when he was taught the names. Human knowledge after that grew by empirical trial and error or through revelations. Development of language and writing played a big role in knowledge development. Publication and telecommunication are responsible for the current knowledge revolution.

Sources Of Knowledge, *masadir al ma'arifat*:

All knowledge is from Allah. Humans can get it in a passive way from revelations or in an active way by empirical observation and experimentation. Whatever knowledge they

get is ultimately from Allah. Knowledge may be innate or acquired. Humans have knowledge of the creator even before birth. Some human knowledge is instinct. Most human knowledge is learned as observation, '*ilm tajriibi*'; transmission, '*ilm naqli*'; or analysis and understanding, '*ilm 'aqli*'. Seeking to know is an inner human need that satisfies curiosity. Revelation, *wahy*, inference, '*aql*', and empirical observation of the universe, *kaun*, are major sources of acquired knowledge accepted by believers. In terms of quantity, empirical knowledge, '*ilm tajriibi*', comes first. In terms of quality revealed knowledge, '*ilm al wahy*', comes first. There is close interaction and inter-dependence between revelation, inference, and empirical observation. '*Aql*' is needed to understand *wahy* and reach conclusions from empirical observations. *Wahy* protects '*aql*' from mistakes and provides it with information about the unseen. '*Aql*' cannot, unaided, fully understand the empirical world. There is lack of unanimity on the following as additional sources of knowledge: '*ilm laduniy*'; inspiration, *ilham*; intuition, *hadas*; instinct, *jabillat*; geomancy, *firasat*; dreams, *ru'uyat*; and *kashf*. The controversy is not whether they are sources of knowledge but whether they are sources independent of the three mentioned before. Magic & sorcery, *sahr*; astrology, *tanjiim*; foretelling, *kahanat & tatayur*; and other forms of superstition are not sources of true knowledge. They may lead to correct and verifiable facts but only by chance and coincidence. They most often lead to wrong and misleading facts.

Classification Of Knowledge, *tasnif al marifat*

Knowledge can be innate or acquired. It can be '*aqli*' and '*naqli*'. It can be knowledge of the seen, '*ilm al shahadat*', and knowledge of the unseen, '*ilm al ghaib*'. The unseen can be absolute, *ghaib mutlaq*, or relative, *ghaib nisbi*. Some knowledge is individually obligatory, *fard 'ain*, whereas other knowledge is collectively obligatory, *fard kifayat*. Knowledge can be useful, *nafiu*. Knowledge can be basic or applied. There are many different disciplines of knowledge.

Limitations Of Human Knowledge, *mahdudiyat al marifat al bashariyyat*

The Qur'an in many verses has reminded humans that their knowledge in all spheres and disciplines of knowledge is limited. Human senses can be easily deceived. Human intellect has limitations in interpreting correct sensory perceptions. Humans cannot know the unseen, *ghaib*. Humans can operate in limited time frames. The past and the future are unknowable with certainty. Humans operate in a limited speed frame at both the conceptual and sensory levels. Ideas can not be digested and processed if they are generated too slowly or too quickly. Humans cannot visually perceive very slow or very rapid events. Very slow events like the revolution of the earth or its rotation are perceived as if they are not happening. Human memory is limited. Knowledge acquired decays or may be lost altogether. Humans would have been more knowledgeable if they had perfect memory.

Crisis Of Knowledge, *azmat al ma'arifat*

Manifestations Of The Crisis

There is pervasive ignorance of *uluum al diin* and *uluum al dunia*. There is little respect for scholarship. Wealth and power are considered more important than scholarship. There is neglect of the empirical sciences. There is a dichotomy in the education system: traditional Islamic vs. imported European, *ulum al diin* vs *ulum al dunia*. Integration of the 2 systems has failed or has been difficult because it has been mechanical and not conceptual. The process of secularization in education has removed the moral dimension from the education and violated the aim of Islamic education to produce an integrated and perfect individual, *insan kaamil*. The brain drain from Muslim countries has compounded the educational crisis.

Ummatic Malaise Due To The Knowledge Crises

Knowledge deficiency and intellectual weakness are the most significant manifestation of *ummat's* decadence. The intellectual crisis of the *ummat* is worsened by copying and using poorly digested alien ideas and concepts. The prophet

warned the ummat about the lizard-hole phenomenon in which the ummat in later times would follow its enemies unquestionably like the lizard running into its hole. Among the manifestations of the ummatic malaise are deficient *ibadat*, action deficiency, political weakness, economic dependency, military weakness, dependence in science and technology, and erosion of the Islamic identity in life-style.

Historical Background

The generation of the Prophet (pbuh) was the best generation. The best teacher met the best students and excellent results were obtained. Companions had excellent knowledge and understanding. Seeds of the current crisis appeared towards the end of the *khilafat rashidat*... New social and political forces overthrew the *khilafat rashidat* and the ideals it represented were distorted or abolished. Then the authentic *'ulama* and opinion leaders who remained faithful to the ideals of Islam were marginalized and persecuted. Intellectual stagnation then ensued. The process of secularization of the Muslim state progressed. Widespread ignorance and illiteracy became common. Many non-Islamic ideas and facts without valid proof have found their way into the intellectual and religious heritage of the *ummat* making the existing intellectual crisis even worse.

Knowledge, A Pre Requisite For *Tajdid*

Reform and revival of the ummat will occur through educational and knowledge reform. *Tajdid* is a recurring phenomenon in the *ummat* and is a sign of its health and dynamism. It is a basic characteristic of the *ummat* that periods of reform/revival alternate with periods of decay and return to *jahiliyyat*. *Tajdid* requires knowledge, ideas and action related by the following mathematical equation: $tajdid = idea + action$. Action without knowledge and guiding ideas will not lead to true change. Ideas without action are not change at all. *Tajdid* requires and is preceded by a reform in knowledge to provide ideas and motivation on which to build. All successful societal reform starts with change in knowledge. The ideal society cannot be created without a knowledge base. That knowledge

base must be correct, relevant, and useful. Successful revival movements throughout Muslim history have always been led by scholars.

Knowledge: Strategy, Obligations, And Etiquette

The Muslim *ummat* is a potential economic and political *bloc* whose potential is not yet realized. The contemporary *tajdid* movement has a lot of strengths but also has basic deficiencies that must be corrected. The knowledge and intellectual crises are still a barrier. Reform movements unguided by correct knowledge and understanding will falter and fail or will be deviated from their paths. Social change requires change in attitudes, values, convictions and behavior of a critical mass of the population. Attitudes, values, convictions, and behaviors are determined by the knowledge base. The vision of the knowledge strategy is an upright balanced person who understands the creator, knows his place, his roles, his rights, and his responsibilities in the cosmic order. The mission of the knowledge strategy is conceptual transformation of the education system from kindergarten to post graduate studies to reflect *tauhid*, positive moral values, objectivity, universality, and serving the larger causes of humanity.

Methodology Of Knowledge, *manhaj al ma'arifat*

Concepts

Methodology started with Adam naming and classifying all things followed by trial and error discoveries and later by systematic methodological investigation. Inspired by the Qur'an, Muslims developed the empirical scientific methodology that triggered the European reformation, renaissance, and scientific and technological revolution starting in the early 16th century CE. Francis Bacon (1561-1626) knew Arabic, learned from Muslims, and was the first European to write about the empirical methodology. Europeans copied the empirical methodology without its *tauhidi* context, rejected *wahy* as a source of knowledge, and later imposed badly-copied secularized science on the Muslim world. Ancient Muslim scientists had shown that *wahy*, *'aql*, and empiricism were compatible and had used methodological tools from the

Qur'an to correct deficiencies and improve Greek science before passing it on to Europeans. They replaced Aristotelian deductive logic and definitions with an Islamic inductive logic inspired by the Qur'an.

Methodology From The Quran, *manhaj qur'ani*

The Qur'anic provides general guiding principles and is not a substitute for empirical research. It enjoins empirical observation; liberates the mind from superstition, blind following, intellectual dependency, and whims. Its *tauhidi* paradigm is the basis for causality, rationality, order, predictability, innovation, objectivity, and natural laws. Laws can be known through *wahy*, empirical observation and experimentation. The Qur'anic teaches the inductive methodology, empirical observation, *nadhar* and *tabassur*; interpretation, *tadabbur*, *tafakkur*, *i'tibaar* & *tafaquhu*; and evidential knowledge, *bayyinat* and *burhan*. It condemns blind following, *taqliid*, conjecture, *dhann*; and personal whims, *hiwa al nafs*. The Qur'anic concept of *istiqamat* calls for valid and un-biased knowledge. The Qur'anic concepts of *istikhlaf*, *taskhir*, and *isti'imar* are a basis for technology. The concept of *'ilm nafei* underlies the imperative to transform basic knowledge into useful technology.

Methodology From The Classical Islamic Sciences

Classical sciences and their concepts are applicable to S&T. *Tafsir 'ilmi* and *tafsir mawdhu'e* parallel data interpretation in empirical research. *'Ilm al nasakh* explains how new data updates old theories without making them completely useless. *'Ilm al rijaal* can ascertain the trustworthiness of researchers. *'Ilm naqd al hadith* can inculcate attitudes of critical reading of scientific literature. *Qiyaas* is analogical reasoning. *Istihbaab* is continued application of a hypothesis or scientific laws until disproved. *Istihsan* is comparable to clinical intuition. *Istislah* is use of public interest to select among options for example medical technologies. *Ijma* is consensus-building among empirical researchers. *Maqasid al shariat* are conceptual tools for balanced use of S&T. *Qawaid al shariat* are axioms that simplify complex logical operations by using established axioms without going through detailed derivations.

Islamic Critique Of The Empirical Method, *naqd al manhaj al tajribi*

Using methodological tools from the Qur'an and classical Islamic sciences, Muslims developed a new empirical and inductive methodology in the form of *qiyaas usuuli* and also pioneered the empirical methods by experimentation and observation in a systematic way as illustrated by the work on Ibn Hazm on optics. They criticize ancient Greek methodology as conjectural, hypothetical, despising perceptual knowledge, and based on deductive logic. They accept the European scientific method of formulating and testing hypothesis but reject its philosophical presumptions: materialism, pragmatism, atheism, rejection of *wahy* as a source of knowledge, lack of balance, rejection of the duality between matter and spirit, lack of human purpose, lacks of an integrating paradigm like *tauhid*, and being Euro-centric and not universal. European claims to being open-minded, methodological, accurate, precise, objective, and morally neutral have been observed not to hold in practice. In its arrogance it treats as absolute probabilistic and relativistic empirical knowledge based fallible human observation and interpretation.

Towards An Islamic Methodology

A *tauhidi* universal, objective and unbiased methodology must replace the Euro-centric and philosophically biased context and not the practical experimental methods. The precepts of *tauhidi* science are: unity of knowledge, comprehensiveness; causality is the basis for human action, human knowledge is limited, investigation of causal relations is based on constant and fixed natural laws, harmony between the seen and the unseen, 3 sources of knowledge (*wahy*, *aql* & empirical observation); *khilafat*; moral accountability; creation and existence have a purpose, truth is both absolute and relative, human free will is the basis of accountability, and *tawakkul*.

Classical Sciences

Sciences Of The Qur'an, *uluum al Qur'an*

Qur'anic sciences deal with general matters relating to the revelation, arrangement, collection, writing, recitation, interpretation, miracles of the Qur'an, '*Ilm tafsir al Qur'an*, the most important Qur'anic science, elucidates Allah's intention in the Qur'an to the best of human capacity. The literal meaning corresponds to the actual meaning in clear verses, *ayat muhakamat*. The actual meaning of allegorical verses, *ayat mutashabihaat*, cannot be elucidated from the literal meaning necessitating interpretation. *Tafsir* was undertaken by the prophet and companions. It is a dynamic and growing discipline because the Qur'an is a continuing challenge and every generation understands it in its own way. The 2 primary sources of *tafsir* are the Qur'an itself and the *sunnat*. Additional sources are *Ijtihad* and inference, *istinbaat*, Interpretation by precedent; *tafsir bi al ma'athuur* is interpretation by the Qur'an, the *sunnat*, the companions and the followers. *Tafsiir* based on *ijtihad*, rationality & opinion, *tafsir bi al ra'ay*, is praiseworthy if based on general principles of the Qur'an and blameworthy if based purely on human reasoning. Interpretation based on empirical science, *tafsir 'ilmi*, is empirical and scientific asserting that there is no contradiction between science and the Qur'an. It discovers the link between the Qur'an and discoveries of empirical science. The concept of *ta'awil* is positive when it is used to mean *tafsir* and negative when it refers to attempts at interpreting the holy text to support pre-conceived views or personal or parochial interests. Indexation of the Qur'an makes it easier to look up verses dealing with subjects of interest.

Sciences Of Hadith, '*uluum al hadith*

'*ilm al hadith* is the science of the principles by which the status of the chain of transmitters, *sanad*, and the text, *matn*, are ascertained. Criteria more stringent than laws of evidence in courts are used to grade a hadith and accept it as valid. The most important hadith collections are *al Muwattaa*; *Musnad*

Ahmad, Sunan al Daarimi, Sahiih al Bukhari, Sahiih Muslim, Sunan Ibn Majah, Sunan Abu Daud, al Jamiu al Sahiih li al Tirmidhi, and Sunan al Nisae .

Biography Of The Prophet, 'Uluum Al Siirat

'Ilm al sirat studies the life of the Prophet, personality, attributes, public and private behavior, work methodology, leadership and management, and all his interactions with his companions and others in the society. Because of its religious importance *'ilm al sirat* is studied separately from history. It is also separated from *'uluum al hadith* because it employs a less rigorous methodology in collecting, analyzing, and accepting information. The sources of *'ilm al sirat* are: the Holy Qur'an, books of hadith, Arab poetry of that time, and special books of *sirat* that were written.

Sciences Of Fundamentals Of Religion, 'uluum usul al ddiin

'Ilm usul al ddiin (also *'ilm al tauhid, 'ilm al kalaam, & 'ilm al aqidat*) deals with obligatory matters of the creed. The Islamic creed is characterized by simplicity, realism, tolerance, and a humane approach. It would not have required a separate discipline were it not for intellectual confusion that followed Muslim contact with Greek philosophy and logic. The main issues of *'ulum usul al diin* are: *tauhid, shirk, and bid'at,*

Sciences Of The Law & Its Fundamentals, uluum al fiqh wa usulihi

Fiqh is the knowledge of legal rules. *Fiqh* covers *ibadat*; civil transactions, personal, criminal, judicial, constitutional, international, and economic rulings. *Usul al fiqh* is principles used by the *mujtahid* to reach a legal ruling using specific evidence. The main sources of *usul al fiqh* are the Qur'an and *sunnat*. It provides a methodological guideline for the *mujtahid* so that he can pursue his analysis in a systematic and tried way. It also lends credibility to the conclusions of the *mujtahid* because people will know that he followed an established methodology and was not following his personal whims or

fancies. Thus *usul al fiqh* helps people trust the conclusions of the *mujtahid*.

Tarbiyyat 'Ilmiyyat Qur'aniyyat

Basic Concepts

Basic concepts are the Qur'an, intellect, knowledge, fiqh, thinking, innovation and creativity. The Qur'an is not a textbook of science. It however contains many verses that train the mind to observe, analyze, think and act in a scientific manner. The Qur'anic stories have lessons, many scientific, for those who understand. Intellect is correlated with signs and with knowledge. Failure to use the intellect and blind following are condemned. Knowledge is supreme. It removes blind following. Human knowledge is limited. Knowledge is acquired by study. Humans were ordained to read. Knowledge by itself is not useful unless it is associated with work. The Qur'an has used the term *fiqh* to refer to understanding which is deeper than knowing. The Qur'an puts emphasis on thinking. Thinking is based on empirical observation. The Qur'an emphasizes freedom of thought in the form of freedom of belief. Innovations in religion are prohibited but creativity is encouraged.

Descriptive Knowledge

The Qur'an described mountains, the barrier between two oceans, metal, the wind, plants, the sky, honey, and water. It described the motion of the earth, the boats, the sun, the moon, the water, and of the wind. It described processes such as making of iron, armor, dams, and boats. It described the creation of the human from dust. It describes the constant laws of nature, *sunan al laah fi al kawn*. The laws are fixed and stable and operate in various situations. Order is a law of nature. Recording of observations is emphasized.

Analytic Knowledge

The Qur'an calls for evidence. It rejects false evidence and condemns non evidence-based knowledge such as sorcery, consulting fortune tellers, speculation or conjecture. Human thought is a tool and not an end in itself. It operates on the basis of empirical observations and revelation, both objective

sources of information, Thought that is not based on an empirical basis or revelation is speculative and leads to wrong conclusions. The Qur'an calls for objectivity. It condemns following subjective feelings and turning away from the truth. Reliance is on observation and not speculation. The Qur'an calls upon humans to observe Allah's signs in the universe and in humans. The Qur'an however made it clear that human senses have limitations. Rational thinking and logical operations were described. In many prohibitions the Qur'an provides logical reasons. The use of similitude, *tashbih*, of two things and phenomena is seen several verses. The Qur'an also employed many examples, *mithl*, to illustrate concepts. Prudence in reaching conclusions is emphasized.

Etiquette Of Scientific Discourse

Questions can be for finding out information. The opposing opinion should be respected. Differences on scientific matters can arise and are natural. Discussion and exchange of views is a necessity for humans. Discussion has its own etiquette. Truth must be revealed. Contradictions must be avoided. Arrogance is condemned. The following are attributes of good discussion: objectivity, truthfulness, asking for evidence, and knowledge. Purposeless disputation is frowned upon. False premises should be abandoned once discovered. Fear of people should be no reason for not revealing the truth. Deception is condemned. The truth of any assertion must be checked. *Yaqeen* is the basis of *'ilm* but *dhann* is not.

Islamization Of Knowledge: Concept & Practice

The Concept Of Islamization

Islamization is a process of recasting the corpus of human knowledge to conform to the basic tenets of *'aqidat al tauhid*. The process of Islamization does not call for re-invention of the wheel of knowledge but calls for reform, correction, and re-orientation. It is evolutionary and not revolutionary. It is corrective and reformative. It is the first step in the islamization

and reform of the education system as a prelude to islamization and reform of society.

History Of Islamization

The 2-3rd centuries H witnessed a failed effort at Islamization of knowledge. Greek scientific knowledge was transferred to Muslims together with Greek philosophy and ideas that caused confusions in '*aqiidat*. Greek science depended more on philosophical deduction than experimentally-based induction. It discouraged the scientific *tarbiyat* of the Qur'an which emphasized observation of nature as a basis for conclusions. The recent Islamisation movement towards the close of the 14th century H aimed at de-europeanizing education systems and building an education system based on *tauhid*.

Reform Of Disciplines

Islamization has to start with reforming the epistemology, methodology, and corpus of knowledge of each discipline. It must be pro-active, academic, methodological, objective, and practical. Its vision is objective, universal, and beneficial knowledge in the context of a harmonious interaction of humans with their physical, social, and spiritual environment. Its practical mission is transformation of the paradigms, methodologies, and uses of disciplines of knowledge to conform to *tauhid*. Its immediate goals are: (a) de-Europeanizing paradigms of existing disciplines to change them from parochiality to universal objectivity, (b) reconstruction of the paradigms using Islamic universal guidelines, (c) re-classifying disciplines to reflect universal *tauhidi* values, (d) reforming research methodology to become objective, purposeful, and comprehensive (e) growth of knowledge by research, and (f) inculcating morally correct application of knowledge. The Qur'an gives general principles that establish objectivity and protect against biased research methodology. It creates a world-view that encourages research to extend the frontiers of knowledge and its use for the benefit of the whole universe. Scientists are encouraged to work within these Qur'anic parameters to expand the frontiers of knowledge through research, basic and applied.

Misunderstanding The Reform Process

Islamization has been misunderstood as rejection of the corpus of existing human knowledge and disciplines. It has been

misunderstood as creation of knowledge exclusive to Muslims. It has been misconstrued as rewriting existing text-books to reflect Islamic themes without deep thought about the paradigms and methodology. It has also been confined to spiritual reform of the student, scholar, or researcher. The following superficial approaches to civilization have been tried and failed: 'Insertion' of Qur'anic verses and hadiths in an otherwise European piece of writing, searching for scientific facts in the Qur'an, searching for Qur'anic proof of scientific facts, establishing Qur'anic scientific miracles, searching for parallels between Islamic and European concepts, using Islamic in place of European terminologies, and adding supplementary ideas to the European corpus of knowledge.

Practical Steps/Tasks Of The Reform Process

The first step is a good grounding in Islamic methodological sciences of *usul al fiqh*, *'ulum al Qur'an*, *ulum al hadith*, and *'ulum al llughat*. This is followed by reading the Qur'an and *sunnat* with understanding of the changing time-space dimensions. This is followed by clarification of basic epistemological issues and relations: *wahy* and *aql*, *ghaib* and *shahada*, *'ilm* and *iman*. This is followed by an Islamic critique of basic paradigms, basic assumptions, and basic concepts of various disciplines using criteria of Islamic methodology and Islamic epistemology. Islamic reviews of existing text-books and teaching materials are then undertaken to identify deviations from the *tauhidi* episteme and the Islamic methodology. The initial output of the islamization process will be Islamic introductions to disciplines, *muqaddimat al 'ulum*, establishing basic Islamic principles and paradigms that determine and regulate the methodology, content, and teaching of disciplines. This parallels Ibn Khaldun's Introduction to History, *muqaddimat* presented generalizing and methodological concepts on historical events. Publication and testing of new text-books and other teaching materials is a necessary step towards reform by putting into the hands of teachers and students reformed material. Developing applied knowledge in science and technology from basic knowledge will be the last stage of the reform process. This is because in the end it is science and technology that actually lead to changes in society.

Islamization of knowledge: Medicine as a Model¹

Abstract

The paper starts by summarizing basic concepts and paradigms of Islamic epistemology and methodology of research. It then discusses the current crisis of knowledge and education in the ummat whose resolution will be by Islamization of sciences. Islamization of sciences is defined as identifying biases in research methodology that reflect a non-tauhidi parochial world-view. This is followed by Islamization of the disciplines of knowledge which is reformulating basic epistemological concepts and paradigms of various disciplines from an Islamic tauhidi paradigm characterized by objectivity, istiqamat al ma'arifat, and universality, 'aalamiyyat al ma'arifat, of knowledge. The paper concludes by a brief expose of the on-going experiment of an Islamic Input in the medical curricula.

1.0 Basic Epistemological Concepts

1.1 What Is Islamic Epistemology?, *nadhariyat al ma'arifat al islamiyyat*

Epistemology is the science of knowledge, *'ilm al 'ilm*. It is the study of the origin, nature, and methods of knowledge with the aim of reaching certainty. Islamic epistemology, *nadhariyyat ma'rifiyyat Islamiyyat*, is based on the *tauhidi* paradigm. Its fixed parameters are from revelation, *wahy*. Its variable parameters are conditioned by varying spatio-temporal circumstances. Its sources are revelation (Qur'an and sunnat), empirical observation and experimentation, and human reason. Its main challenge today is achieving objectivity, *al istiqamat*, which is staying on the path of truth and not being swayed by

1 Paper written for a Seminar on The Methodology of Sciences organized by the Epistemology Institute in Cairo 23-26 April 2007

whims and desires. Istiqamat comes only next to *iman*, as the Prophet said '*qul amantu bi al laahi thumma istaqim*'.

1.2 Nature Of Knowledge, *tabi'at al ma'arifat al insaniyyat*

The Qur'anic terms for knowledge are: '*ilm, ma'arifat, hikmat, basiirat, ra'ay, dhann, yaqeen, tadhkirat, shu'ur, lubb, naba', burhan, dirayat, haqq, and tasawwur*. The terms for lack of knowledge are: *jahl, raib, shakk, dhann, and ghalabat al dhann*. Grades of knowledge are '*ilm al yaqeen, 'ayn al yaqeen, and haqq al yaqeen*. Knowledge is correlated with *iman, 'aql, qalb, and taqwah*. The Qur'an emphasizes the evidential basis of knowledge, *hujjiyat al burhan*. The seat of knowledge is the '*aql, and qalb*. Allah's knowledge is limitless but human knowledge is limited. Humans vary in knowledge. Knowledge is public property that cannot be hidden or monopolized. Humans, angels, jinn, and other living things have varying amounts of knowledge. Knowledge can be absolute for example revealed knowledge. Other types of knowledge are relative, *nisbiyat al haqiqat*. The probabilistic nature of knowledge arises out of limitations of human observation and interpretation of physical phenomena.

1.3 History Of Human Knowledge, *tarikh al ma'rifat al insaniyyat*

Adam was the first human to learn actively when he was taught the names of all things. Human knowledge after that grew by empirical trial and error or through revelations. Development of language and writing played a big role in knowledge development. Publication and telecommunication are responsible for the current knowledge revolution.

1.4 Sources Of Knowledge, *masadir al ma'arifat*

All knowledge is from Allah. Humans can get it in a passive way from revelations or in an active way by empirical observation and experimentation. Whatever knowledge they get is ultimately from Allah. Knowledge may be innate or acquired. Humans have knowledge of the creator even before birth. Some human knowledge is instinct. Most human knowledge is learned as observation, '*ilm tajriibi*'; transmission,

'ilm naqli; or analysis and understanding, *'ilm 'aqli*. Seeking to know is an inner human need that satisfies curiosity.

Revelation, *wahy*, inference, *'aql*, and empirical observation of the universe, *kaun*, are major sources of acquired knowledge accepted by believers. In terms of quantity, empirical knowledge, *'ilm tajriibi*, comes first. In terms of quality revealed knowledge, *'ilm al wahy*, comes first. There is close interaction and inter-dependence between revelation, inference, and empirical observation. *'Aql* is needed to understand *wahy* and reach conclusions from empirical observations. *Wahy* protects *'aql* from mistakes and provides it with information about the unseen. *'Aql* cannot, unaided, fully understand the empirical world.

There is lack of unanimity on the following as additional sources of knowledge: *'ilm laduniy*; inspiration, *ilham*; intuition, *hadās*; instinct, *jabillat*; geomancy, *firasat*; dreams, *ru'uyat*; and *kashf*. The controversy is not whether they are sources of knowledge but whether they are sources independent of the three mentioned before. Magic & sorcery, *sihr*; astrology, *tanjiim*; foretelling, *kahanat & tatayur*; and other forms of superstition are not sources of true knowledge. They may lead to correct and verifiable facts but only by chance and coincidence. They most often lead to wrong and misguiding facts.

1.5 Classification Of Knowledge, *tasnif al marifat*

Knowledge can be innate or acquired. It can be *'aqli* or *naqli*. It can be knowledge of the seen, *'ilm al shahadat*, and knowledge of the unseen, *'ilm al ghaib*. The unseen can be absolute, *ghaib mutlaq*, or relative, *ghaib nisbi*. Acquisition of knowledge may be individually obligatory, *fard 'ain*, whereas other knowledge is collectively obligatory, *fard kifayat*. Knowledge can be useful, *'ilmu nafiu*. Knowledge can be basic or applied. There are many different disciplines of knowledge. The disciplines keep changing with advance of knowledge and understanding. A discipline is defined and is limited by its methodology.

1.6 Limitations Of Human Knowledge, *mahdudiyat al marifat al bashariyyat*

The Qur'an in many verses has reminded humans that their knowledge in all spheres and disciplines of knowledge is limited. Human senses can be easily deceived. Human intellect has limitations in interpreting correct sensory perceptions. Humans cannot know the unseen, *ghaib*. Humans can operate in limited time frames. The past and the future are unknowable with certainty. Humans operate in a limited speed frame at both the conceptual and sensory levels. Ideas can not be digested and processed if they are generated too slowly or too quickly. Humans cannot visually perceive very slow or very rapid events. Very slow events like the revolution of the earth or its rotation are perceived as if they are not happening. Human memory is limited. Knowledge acquired decays or may be lost altogether. Humans would have been more knowledgeable if they had perfect memory.

2.0 Methodology Of Knowledge, *Manhaj Al Ma'arifat*

2.1 Concepts

Methodology started with Adam naming and classifying all things followed by trial and error discoveries and later by systematic methodological investigation. Inspired by the Qur'an, Muslims developed the empirical scientific methodology that triggered the European reformation, renaissance, and scientific and technological revolution starting in the early 16th century CE. Francis Bacon (1561-1626), the first European to write systematically about the empirical methodology was inspired by Muslim science reaching Europe in his times. Europeans copied the empirical methodology without its *tauhidi* context, rejected *wahy* as a source of knowledge, and later imposed badly-copied secularized science on the Muslim world. Ancient Muslim scientists had shown that *wahy*, *'aql*, and empiricism were compatible and had used methodological tools from the Qur'an to correct deficiencies and improve Greek science before passing it on to Europeans. They replaced Aristotelian deductive logic and definitions with an Islamic inductive logic inspired by the Qur'an.

2.2 Methodology From The Quran, *manhaj qur'ani*

The Qur'an provides general guiding principles and is not a substitute for empirical research. It enjoins empirical observation; liberates the mind from superstition, blind following, intellectual dependency, and whims. Its *tauhidi* paradigm is the basis for causality, rationality, order, predictability, innovation, objectivity, and natural laws. Laws can be known through *wahy*, empirical observation and experimentation. The Qur'anic teaches the inductive methodology, empirical observation, *nadhhar & tabassur*; interpretation *tadabbur, tafakkur, i'tibaq & tafaquhu*; and evidential knowledge, *bayyinah & burhan*). It condemns blind following, *taqliid*, conjecture, *dhann*; and personal whims, *hiwa al nafs*. The Qur'anic concept of *istiqamat* calls for valid and un-biased knowledge. The Qur'anic concepts of *istikhlaf, taskhir*, and *isti'imar* are a basis for technology. The concept of *'ilm nafei* underlies the imperative to transform basic knowledge into useful technology.

2.3 Methodology From The Classical Islamic Sciences

Classical sciences and their concepts are applicable to science and technology. *Tafsir 'ilmi* and *tafsir mawdu'e* parallel data interpretation in empirical research. *'Ilm al nasakh* explains how new data updates old theories without making them completely useless. *'Ilm al rijaal* can ascertain the trustworthiness of researchers. *'Ilm naqd al hadith* can inculcate attitudes of critical reading of scientific literature. *Qiyaas* is analogical reasoning. *Istihbaab* is continued application of a hypothesis or scientific laws until disproved. *Istihsan* is comparable to clinical intuition. *Istislah* is use of public interest to select among options for example medical technologies. *Ijma* is consensus-building among empirical researchers. *Maqasid al shariat* are conceptual tools for balanced use of S&T. *Qawaid al shariat* are axioms that simplify complex logical operations by using established axioms without going through detailed derivations.

2.4 Islamic Critique Of The Empirical Method, *naqd al manhaj al tajribi*

Using methodological tools from the Qur'an and classical Islamic sciences, Muslims developed a new empirical and inductive methodology in the form of *qiyaas usuuli* and also pioneered the empirical methods by experimentation and observation in a systematic way as illustrated by the work on Ibn Hazm on optics. They criticize ancient Greek methodology as conjectural, hypothetical, despising perceptual knowledge, and based on deductive logic. They accept the European scientific method of formulating and testing hypothesis but reject its philosophical presumptions: materialism, pragmatism, atheism, rejection of *wahy* as a source of knowledge, lack of balance, rejection of the duality between matter and spirit, lack of human purpose, lacks of an integrating paradigm like *tauhid*, and being Euro-centric and not universal. European claims to being open-minded, methodological, accurate, precise, objective, and morally neutral have been observed not to hold in practice. In its arrogance it treats as absolute probabilistic and relativistic empirical knowledge based fallible human observation and interpretation.

3.0 crisis of knowledge and Education, *azmat al ma'arifat wa al ta'aliim*

3.1 Manifestations Of The Crisis

There is pervasive ignorance of *ulum al diin* and *ulum al dunia*. There is little respect for scholarship. Wealth and power are considered more important than scholarship. There is neglect of the empirical sciences. There is a dichotomy in the education system: traditional Islamic vs. imported European, *ulum al diin* vs *ulum al dunia*. Integration of the 2 systems has failed or has been difficult because it has been mechanical and not conceptual. The process of secularization in education has removed the moral dimension from the education and violated the aim of Islamic education to produce an integrated and perfect individual, *insan kaamil*. The brain drain from Muslim countries has compounded the educational crisis.

3.2 Ummatic Malaise Due To The Knowledge Crises

Knowledge deficiency and intellectual weakness are the most significant manifestation of *ummat's* decadence. The intellectual crisis of the *ummat* is worsened by copying and using poorly digested alien ideas and concepts. The prophet warned the *ummat* about the lizard-hole phenomenon in which the *ummat* in later times would follow its enemies unquestionably like the lizard running into its hole. Among the manifestations of the *ummatic* malaise are action deficiency, political weakness, economic dependency, military weakness, dependence in science and technology, and erosion of the Islamic identity in life-style.

3.3 Historical Background

The generation of the Prophet (PBUH) was the best generation. The best teacher met the best students and excellent results were obtained. Companions had excellent knowledge and understanding. Seeds of the current crisis appeared towards the end of the *khilafat rashidat*. New social and political forces overthrew the *khilafat rashidat* and the ideals it represented were distorted or abolished. Then the authentic '*ulama* and opinion leaders who remained faithful to the ideals of Islam were marginalized and persecuted. Intellectual stagnation then ensued. The process of secularization of the Muslim state progressed. Widespread ignorance and illiteracy became common. Many non-Islamic ideas and facts without valid proof have found their way into the intellectual and religious heritage of the *ummat* making the existing intellectual crisis even worse.

4.0 Preliminary Steps Towards Reform Of Knowledge And Education

4.1 Knowledge, A Pre Requisite For *Tajdid*

Reform and revival of the *ummat* will occur through educational and knowledge reform. *Tajdid* is a recurring phenomenon in the *ummat* and is a sign of its health and dynamism. It is a basic characteristic of the *ummat* that periods of reform/revival alternate with periods of decay and return to

jahiliyyat. *Tajdid* requires knowledge, ideas and action related by the following mathematical equation: *tajdid* = idea + action. Action without knowledge and guiding ideas will not lead to true change. Ideas without action are not change at all. *Tajdid* requires and is preceded by a reform in knowledge to provide ideas and motivation on which to build. All successful societal reform starts with change in knowledge. The ideal society cannot be created without a knowledge base. That knowledge base must be correct, relevant, and useful. Successful revival movements throughout Muslim history have always been led by scholars.

4.2 A New Knowledge Strategy, *nahwa istratijiyyat ma'arifiiyyat jadiidat*

The Muslim *ummat* is a potential economic and political *bloc* whose potential is not yet realized. The contemporary *tajdid* movement has a lot of strengths but also has basic deficiencies that must be corrected. The knowledge and intellectual crises are still a barrier. Reform movements unguided by correct knowledge and understanding will falter and fail or will be deviated from their paths. Social change requires change in attitudes, values, convictions and behavior of a critical mass of the population. Attitudes, values, convictions, and behaviors are determined by the knowledge base. The vision of the knowledge strategy is an upright balanced person who understands the creator, knows his place, his roles, his rights, and his responsibilities in the cosmic order. The mission of the knowledge strategy is conceptual transformation of the education system from kindergarten to post graduate studies to reflect *tauhid*, positive moral values, objectivity, universality, and serving the larger causes of humanity.

4.3 Towards An Islamic Methodology, *nahwa manhajiyyat 'ilmiyyat islamiyyat*

A *tauhidi* universal, objective and unbiased methodology must replace the Euro-centric and philosophically biased context and not the practical experimental methods. The precepts of *tauhidi*

science are: unity of knowledge, comprehensiveness; causality is the basis for human action, human knowledge is limited, investigation of causal relations is based on constant and fixed natural laws, harmony between the seen and the unseen, 3 sources of knowledge (*wahy*, *aql* & empirical observation); *khilafat*; moral accountability; creation and existence have a purpose, truth is both absolute and relative, human free will is the basis of accountability, and *tawakkul*.

5.0 Development Of A Scientific Culture, *nahwa thaqafat 'ilmiyyat*

5.1 Basic Concepts

The Qur'an is the basis for developing a vigorous and dynamic scientific culture in the *ummat*. Basic concepts are the Qur'an, intellect, knowledge, fiqh, thinking, innovation and creativity. The Qur'an is not a textbook of science. It however contains many verses that train the mind to observe, analyze, think and act in a scientific manner. The Qur'anic stories have lessons, many scientific, for those who understand. Intellect is correlated with signs and with knowledge. Failure to use the intellect and blind following are condemned. Knowledge is supreme. It removes blind following. Human knowledge is limited. Knowledge is acquired by study. Humans were ordained to read. Knowledge by itself is not useful unless it is associated with work. The Qur'an has used the term fiqh to refer to understanding which is deeper than knowing. The Qur'an puts emphasis on thinking. Thinking is based on empirical observation. The Qur'an emphasizes freedom of thought in the form of freedom of belief. Innovations in religion are prohibited but creativity is encouraged.

5.2 Descriptive Knowledge

The Qur'an described mountains, the barrier between two oceans, metal, the wind, plants, the sky, honey, and water. It described the motion of the earth, the boats, the sun, the moon, the water, and of the wind. It described processes such as making of iron, armor, dams, and boats. It described the creation of the human from dust. It describes the constant laws

of nature, *sunan al laah fi al kawn*. The laws are fixed and stable and operate in various situations. Order is a law of nature. Recording of observations is emphasized.

5.3 Analytic Knowledge

The Qur'an calls for evidence. It rejects false evidence and condemns non evidence-based knowledge such as sorcery, consulting fortune tellers, speculation or conjecture. Human thought is a tool and not an end in itself. It operates on the basis of empirical observations and revelation, both objective sources of information, thought that is not based on an empirical basis or revelation is speculative and leads to wrong conclusions. The Qur'an calls for objectivity. It condemns following subjective feelings and turning away from the truth. Reliance is on observation and not speculation. The Qur'an calls upon humans to observe Allah's signs in the universe and in humans. The Qur'an however made it clear that human senses have limitations. Rational thinking and logical operations were described. In many prohibitions the Qur'an provides logical reasons. The use of similitude, *tashbiih*, of two things and phenomena is seen several verses. The Qur'an also employed many examples, *mithl*, to illustrate concepts. Prudence in reaching conclusions is emphasized.

5.4 Etiquette Of Scientific Discourse

The Qur'an and sunnat teach the etiquette of scientific discourse. Questions can be for finding out information. The opposing opinion should be respected. Differences on scientific matters can arise and are natural. Discussion and exchange of views is a necessity for humans. Discussion has its own etiquette. Truth must be revealed. Contradictions must be avoided. Arrogance is condemned. The following are attributes of good discussion: objectivity, truthfulness, asking for evidence, and knowledge. Purposeless disputation is frowned upon. False premises should be abandoned once discovered. Fear of people should be no reason for not revealing the truth. Deception is condemned. The truth of any assertion must be checked. *Yaqaen* is the basis of '*ilm* but *dhann* is not.

6.0 Islamization Of Knowledge: Concept & Practice

6.1 The Concept Of Islamization:

Islamization is a process of recasting the corpus of human knowledge to conform to the basic tenets of '*aqidat al tauhid*. The process of Islamization does not call for re-invention of the wheel of knowledge but calls for reform, correction, and re-orientation. It is evolutionary and not revolutionary. It is corrective and reformative. It is the first step in the reform of the education system as a prelude to reform of society.

6.2 History Of Islamization

The 2-3rd centuries H witnessed a failed effort at Islamization of knowledge. Greek scientific knowledge was transferred to Muslims together with Greek philosophy and ideas that caused confusions in '*aqiidat*. Greek science depended more on philosophical deduction than experimentally-based induction. It discouraged the scientific *tarbiyat* of the Qur'an which emphasized observation of nature as a basis for conclusions. The recent Islamisation movement towards the close of the 14th century H aimed at de-europeanizing education systems and building an education system based on *tauhid*.

6.3 Reform Of Disciplines

Islamization has to start with reforming the epistemology, methodology, and corpus of knowledge of each discipline. It must be pro-active, academic, methodological, objective, and practical. Its vision is objective, universal, and beneficial knowledge in the context of a harmonious interaction of humans with their physical, social, and spiritual environment. Its practical mission is transformation of the paradigms, methodologies, and uses of disciplines of knowledge to conform to *tauhid*. Its immediate goals are: (a) de-Europeanizing paradigms of existing disciplines to change them from parochiality to universal objectivity, (b) reconstruction of the paradigms using Islamic universal guidelines, (c) re-classifying disciplines to reflect universal *tauhidi* values, (d) reforming research methodology to become objective, purposeful, and comprehensive (e) growth of

knowledge by research, and (f) inculcating morally correct application of knowledge. The Qur'an gives general principles that establish objectivity and protect against biased research methodology. It creates a world-view that encourages research to extend the frontiers of knowledge and its use for the benefit of the whole universe. Scientists are encouraged to work within these Qur'anic parameters to expand the frontiers of knowledge through research, basic and applied.

6.4 Misunderstanding The Reform Process

Islamization has been misunderstood as rejection of the corpus of existing human knowledge and disciplines. It has been misunderstood as creation of knowledge exclusive to Muslims. It has been misconstrued as rewriting existing text-books to reflect Islamic themes without deep thought about the paradigms and methodology. It has also been confined to spiritual reform of the student, scholar, or researcher. The following superficial approaches to civilization have been tried and failed: 'Insertion' of Qur'anic verses and hadiths in an otherwise European piece of writing, searching for scientific facts in the Qur'an, searching for Qur'anic proof of scientific facts, establishing Qur'anic scientific miracles, searching for parallels between Islamic and European concepts, using Islamic in place of European terminologies, and adding supplementary ideas to the European corpus of knowledge.

6.5 Practical Steps/Tasks Of The Reform Process

The first step is a good grounding in Islamic methodological sciences of *usul al fiqh*, *'ulum al Qur'an*, *ulum al hadith*, and *'ulum al llughat*. This is followed by reading the Qur'an and *sunnat* with understanding of the changing time-space dimensions. This is followed by clarification of basic epistemological issues and relations: *wahy* and *aql*, *ghaib* and *shahada*, *'ilm* and *iman*. This is followed by an Islamic critique of basic paradigms, basic assumptions, and basic concepts of various disciplines using criteria of Islamic methodology and Islamic epistemology. Islamic reviews of existing text-books and teaching materials are then undertaken to identify deviations from the *tauhidi* episteme and the Islamic methodology.

The initial output of the Islamization process will be Islamic introductions to disciplines, *muqaddimat al 'ulum*, establishing basic Islamic principles and paradigms that determine and regulate the methodology, content, and teaching of disciplines. This parallels Ibn Khaldun's Introduction to History, *muqaddimat* presented generalizing and methodological concepts on historical events. Publication and testing of new text-books and other teaching materials is a necessary step towards reform by putting into the hands of teachers and students reformed material. Developing applied knowledge in science and technology from basic knowledge will be the last stage of the reform process. This is because in the end it is science and technology that actually lead to changes in society.

7.0 Stages In The Islamization Of Medical Sciences

7.1 History Of Medicine, *tarikh al tibb*

Pre-Islamic roots of medicine are found in ancient Egyptian, Babylon, Chinese, Indian, Syriac, Persian, Arabian, and Greco-Roman civilizations. Medical knowledge in the early Islamic period (0 – 132 H) was based on traditional Arab medicine and medical teachings of the prophet. Medicine in the golden era of the Abassid period (132 – 656 H) started with translation of Greek and other medical texts. Muslims added the results of their observations and experimentation. Following the Tatar invasion and destruction of the capital of the *khilafat* in Baghdad, the Muslim world went into a period of decline. Medicine and medical knowledge also declined. Medical knowledge spread in Europe from Andalusia. Muslims made many contributions to basic sciences and the various clinical disciplines.

7.2 Prophetic Medicine, *tibb nabawi*

Tibb nabawi refers to words and actions of the Prophet with a bearing on disease, treatment of disease, and care of patients. The Prophet enunciated a basic principle in medicine that for every disease there is cure. The sources of *tibb nabawi* are revelation, empirical experience, and folk medicine of the Arabian Peninsula. *Tibb nabawi* can be spiritual, curative or

preventive. Most of *tibb nabawi* is preventive medicine. *Tibb nabawi* is an authentic and valid medical system. The general principles of this system are applicable at all times and all places. The specific remedies taught by the Prophet (PBUH) are valid and useful. They however can not be used today without undertaking further empirical research because of changes in the human and physical environments.

7.3 Islamic Medicine, *mafhum al tibb al islami*

Islamic Medicine is defined as medicine whose basic paradigms, concepts, values, and procedures conform to or to do not contradict the Qur'an and Sunnah. It is not specific medical procedures or therapeutic agents used in a particular place or a particular time. Islamic Medicine is universal, all-embracing, flexible, and allows for growth and development of various methods of investigating and treating diseases within the frame-work described above. This definition calls for basic transformation of current medical systems. Islamic Medicine thus becomes the result of an Islamic critique and reformulation of the basic paradigms, research methodology, teaching, and practice of medicine. This process is called Islamization of Medicine. The end-result of the Islamization process will not be a medical system for Muslims only but for the whole humanity because Islam is a set of universal and objective values.

7.4 Islamization Of Knowledge In Medicine, *islamiyyat al tibb*

Muslims failed to Islamize Greek medicine when they neglected the empirical scientific method of the Qur'an and adopted negative aspects of Greek philosophy that discouraged experimentation. Guided by empirical scientific spirit of the Qur'an, Muslims must be innovative, creative, and researchers in basic and applied medical sciences so that they may become leaders of the disciplines. A medical student starts by commitment to discipline reform process. He must master your discipline well. He should then get basics of Islamic methodology from *usul al fiqh*, *'ulum al Qur'an* and *'ulum al hadith* to be able to critique the basic paradigms of your discipline on the basis of *tauhid* and the universal and

perennial values of Islam. This is followed by research, publishing, teaching, networking, and inspiring others.

7.5 The Islamic Input Curriculum

The vision of the curriculum has two closely related components: Islamization and legal medicine. Islamization deals with putting medicine in an Islamic context in terms of epistemology, values, and attitudes. Legal medicine deals with issues of application of the Law from a medical perspective. The curriculum has 5 objectives: (a) Introduction of Islamic paradigms and concepts in general and as they relate to medicine (b) strengthening *iman* through study of Allah's sign in the human body (c) appreciating and understanding the juridical, *fiqh*, aspects of health and disease, *al fiqh al tibbi* (d) understanding the social issues in medical practice and research (e) professional etiquette, *adab al tabiib*.

8.0 The Islamic Input Curriculum In Medicine

8.1 Introduction To The Islamic Input Curriculum (Iimc)

The main motive of IIMC is to resolve the crisis of duality or dichotomy manifesting as teaching Islamic sciences separately from medical disciplines by different teachers and in different institutions. IIMC resolves the crisis of duality by insisting that Islamic concepts should be taught by the same people who teach medical disciplines. All lecturers in the Kulliyah of Medicine go through a Diploma in Islamic Studies (DIS) whose modules are exactly the same as the modules of IIMC. This prepares them to be effective teachers of IIMC.

The teaching material of IIMC has been prepared and tested over the past 7 years. Synopses of all lectures for years 1 -5 are available at <http://omarkasule.tripod.com>.

Since the start of the Kulliyah in 1997, we have worked towards integrating Islamic values and concepts in the teaching and examination of basic and clinical medical sciences. The expectation is that our graduates will be able to integrate Islamic moral and legal values in their practice of medicine because they went through an integrated education system.

IIMC follows the Islamic paradigm of reading 2 books, the book of revelation, *kitaab al wahy*, and the book of empirical science, *kitaab al kawn*. Both books contain signs of Allah, *ayaat al llaah*, and must be read together. It is a mistake to read one of the books and neglect the other. The solution to the crisis of duality in the ummah starts from joint reading of the 2 books, *al jam 'u baina al qira atain*. Thus medical scientists who are involved in IIMC read the signs in both books.

The vision of IIC has two separate but closely related components: Islamization and legal medicine. Islamisation deals with putting medicine in an Islamic context in terms of epistemology, values, and attitudes. Legal medicine deals with issues of application of the Law (*fiqh*) from a medical perspective.

IIMC has 5 main objectives: (a) introduction of Islamic paradigms and concepts in general as they relate to medicine, *mafahim Islamiyat fi al Tibb*. (b) strengthening faith, *iman*, through study of Allah's sign in the human body (c) appreciating and understanding the juridical, *fiqh*, aspects of health and disease, *al fiqh al tibbi*. (d) understanding the social issues in medical practice and research and (e) Professional etiquette, *adab al tabiib*, from the Islamic perspective.

We feel that IIC helps the future physician prepare for the heavy trust, the *amanat* of being professionally competent. He must be highly motivated. He must have personal, professional, intellectual, and spiritual development programs. He must know the proper etiquette of dealing with patients and colleagues. He also must know and avoid professional malpractice. He needs to be equipped with leadership and managerial skills to be able to function properly as a head of a medical team.

8.2 Derivation Of Medical Ethics From The *Maqasid Al Shari'at*

In my view the most significant aspect of IIMC is the derivation of medical ethics from Islamic sources as an alternative to western sources. The full impact of this will be appreciated in due course when these ideas become widely adopted.

Secularized European law denied moral considerations associated with 'religion' and therefore failed to solve issues in modern medicine requiring moral considerations. This led to the birth of the discipline of medical ethics that is neither law enforceable by government nor morality enforceable by conscience. On the other hand, Islamic Law is comprehensive and encompasses moral principles directly applicable to medicine.

The theory of medical ethics in Islam should be based on the 5 purposes of the Law, *maqasid al shari'at*, that are also considered the 5 purposes of medicine, *maqasid al tibb*. The 5 purposes are preservation of religion and morality, *hifdh al ddiin*; preservation of life and health, *hifdh al nafs*; preservation of progeny, *hifdh al nasl*; preservation of intellect, *hifdh al 'aql*; and preservation of wealth, *hifdh al maal*. Any medical action must fulfill one of the above purposes if it is to be considered ethical. If any medical procedure violates any of the 5 purposes it is deemed unethical.

In practical detailed situations, legal axioms called Principles of the Law or *qawa'id al shari'at* need to be used to resolve mostly situations of apparent conflict between *maqasid* or to assist logical reasoning. Principles of the Law, *qawa'id al shari'at*, when applied to the medical area can also be referred to as Ethical Principles of Medicine, *qawa'id al tibb*. The basic ethical principles of Islam relevant to medical practice be derived from the 5 principles of the Law, *qawa'id al shari'at*, that are: intention, *qasd*; certainty, *yaqeen*; injury, *dharar*; hardship, *mashaqqat*; and custom or precedent, *'aadat*. The *maqasid* and *qawa'id* are used in a synergistic way. The basic purpose of *qawa'id* is to provide robust rules for resolving situations of conflict between or among different *maqasid*.

The challenge before Muslim physicians is to liberate themselves from confusing and inconsistent European ethical theories and principles and instead to work hard to develop specific regulations for various medical interventions, *dhawaabit al tibaabat*, by a renewal of *ijtihad*. This *ijtihad* will be based on primary sources of the Law (Qur'an and sunnat),

secondary sources of the Law based on transmission, *masaadir naqliyyat (ijma and qiyaas)*; secondary sources of the Law based on reason, *masaadir 'aqliyyat (istishaab, istihsaan, & istilaah)*; the purposes of the Law, *maqasid al shari'at*; principles of the Law, *qawa'id al fiqh*; as well as regulations of the Law, *dhawaabit al fiqh*.

In the early period of medical jurisprudence (0-1400 H) most issues could be resolved by direct reference to the primary sources. In the middle period (1401 – 1420 H) issues were resolved by using *ijma, qiyaas, istishaab, istihsaan, & istilaah*. In the modern period (1420 -) medical technology is creating so many issues whose resolution will require a broad bird's eye-view approach that can only be found in the theory of *maqasid al shari'at*.

8.3 Outline Of The Curriculum

The following outline shows the teaching of various topics with input of Islamic values and teachings. The teaching is not done separately. The same teachers who teach basic and clinical sciences mention the relevant Islamic values in the same of the same lecture except in a few topics like *'aqidah* that are fundamental and have to be taught separately.

Actual teaching material used over the past 10 years can be found at <http://omarkasule.tripod.com>. Please follow the links carefully.

TOPICS OF IIMC IN 2004/2005

YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5
BLK 1: 'AQIDAT	BLK 1: LIFE & HEALTH	BLK 1a: ELEM CLINIC	BLK 1: MED TECHN	BLK 1: FORMATION
Intro to Islamic Input	Life, <i>al hayaat</i> ,	History Taking	Assisted Reproduction	The study circle
Islam, Iman, & Ihsan:	Death, <i>al mawt</i>	Physical Exam & Invest	Contraception	Self study of Qur'an,
Tauhid	Health, <i>al sihat</i>	Adab: Patient & Families	Reproductive cloning:	Motivation in Islam
Risalat	Disease, <i>al maradh</i>	Adab Health Care Team	Ahortion	Medical Education
Akhirat	Disease treatment, <i>al tibbaat</i>	Adab: with the Dying:	Artificial Life Support	Personal Development
Qadar	<i>al tasawwur al islami</i>		Euthanasia	Skill Develop Program
'Ubudyyat		BLK 1b: LAW/ ETHICS	Organ Transplant	Quality Culture
Taqiyat al Nafs	BLK 2: GROWTH	Over-view	Stem cell transplant	
Ihm & Ghufran	Intra-uterine Life, :	Sources of the Law	Cosmetic Surgery	BLK 2a: LEADERSHI
Kufr & Shirk	Infancy & Childhood:	Purposes and Principles	Animal Research	Basic characteristics:
YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5
<i>Al Millat wa al adyan</i>	Youth	Purposes & Princip of Med	Human Research	Attributes and functions
Concept of 'Ubudyyah:	Middle Age	Medical Procedures:	Research Practice:	Diseases of leaders

	Old Age	Research Procedures:	BLK 2a: TIRANSAC T	Communication
BLK 2: 'ILM		Physician Conduct:	Medical malpractice:	Negotiation
Nature of Knowledge		Professional Misconduct:	Marriage	Value-based Leadership:
Crisis of Knowledge:	BLK 3: BIO MIRACLE		Divorce & annulment:	BLK 2b: LEADERS
Method of Knowledge	Perfection in Anatomy		Inheritance:	The Prophet
Classical Islam Sciences	Perfection in Physiology	BLK 2-FION 'IBADAT	Sales	The righteous khalifah
History of Med Sciences:	Perfection in Biochemistry	Taharat:	Personal Loans	Political leaders
Islamization of Med Science	Control & Homeostasis	Rulings on Salat	Investments	Social role models
Islamization: Other Disciplin	Interaction with the Environ	Physical Acts of Salat	Endowments	Scholars and reformers
Islamic Educ in SE Asia	Epidemiology & Statistics:	Special Types of Salat	BLK 2b: CRIMES	Multicultural society
	Modernization:	Salat in Difficulties	Crimes	BLK 3a: MGMT
		Scum	Legal competence:	Principles and concepts
BLK 3: TARIKH	BLK 4: STRU & FUNC	Zakat	Pleas, & evidence	Strategy
Creation of the Universe I	Alimentary System	Haji	Judgment, conviction,	Planning & implementat
Creation of the Universe II:	Locomotor System		BLK 3: SOC INSTITU	Control and evaluation
Creation of the Human I:	Protective Systems	BLK 3: NORM CONDIT	Family 1: Gender	Decisions & Problems
Creation of the Human II:	Genito-urinary System	Menstruation	Family 2: Marital Rel	BLK 3b: RES MGMT
Khalifah I:	Cardio-respiratory System	Human Sexuality	Family 3:rels & Child	Time Management
Khalifah II:	Sensory System	Pregnancy and Delivery:	The Masjid	Financial management
Tashkir	Nervous System	Breast feeding	Takaful	Information Management
Imaret al Ardh	Globalization	Hygiene	Sharia	Orgn management
Era of Risaalah:		Foods & Drinks	Maal	Personel management
Era of Khalifah Rausulhidat,		Activity, Rest, and Sleep:	BLK 4a: COM PROB	
Islam in the Malay World:			Lifestyle	
		BLK 4: PATH CONDITI	Sexual perversion	
BLK 4: CIVILIZATION		Uro-genital system	Addictions	
Concepts of Civilization:		Cardio-respiratory system:	Poverty	
Ancient Civilizations		Connective tissue system:	Violence	
Cycle of Civilization		Alimentary system: Dr	BLK 4b: SOC ACTS	
Umayyad Era:		Sensory systems:	Dawa:	
Abassid Era:		Gen systemic conditions:	Amr & Nahv	
Ottomani Era:		Psychiatric conditions	Social Change	
Other Muslim Civilizations:		Neurological conditions:	Professional orgs	
Achiev of Islamic Civilizationo		Age-related conditions:	Welfare and Disaster	
Taqdid & Ishaq				
A Common Civilization				

NB: Teaching material can be accessed at <http://omarkasule.tripod.com>

Islamization of the Curriculum: The Islamic input in the Medical Curriculum (IIMC) at the Kulliyah of Medicine

Introduction To The Islamic Input Curriculum

The main motive of IIMC is to resolve the crisis of duality, or dichotomy manifesting as teaching Islamic sciences separately from medical disciplines by different teachers and in different institutions. IIMC resolves the crisis of duality by insisting that Islamic concepts should be taught by the same people who teach medical disciplines. All lecturers in the Kulliyah of Medicine go through a Diploma in Islamic Studies (DIS) whose modules are exactly the same as the modules of IIMC. This prepares them to be effective teachers of IIMC.

The teaching material of IIMC has been prepared and tested over the past 7 years. Synopses of all lectures for years 1-5 are available at <http://omarkasule.tripod.com>.

Since the start of the Kulliyah in 1997, we have worked towards integrating Islamic values and concepts in the teaching and examination of basic and clinical medical sciences. The expectation is that our graduates will be able to integrate Islamic moral and legal values in their practice of medicine because they went through an integrated education system.

IIMC follows the Islamic paradigm of reading 2 books, the book of revelation, *kitaab al wahy*, and the book of empirical science, *kitaab al kawn*. Both books contain signs of Allah, *ayaat al llaah*, and must be read together. It is a mistake to read one of the books and neglect the other. The solution to the crisis of duality in the ummah starts from joint reading of the 2 books, *al jam 'u baina al qira atain*. Thus medical scientists who are involved in IIMC read the signs in both books.

The vision of IIC has two separate but closely related components: Islamization and legal medicine. Islamisation

deals with putting medicine in an Islamic context in terms of epistemology, values, and attitudes. Legal medicine deals with issues of application of the Law (*fiqh*) from a medical perspective.

IIMC has 5 main objectives: (a) introduction of Islamic paradigms and concepts in general as they relate to medicine, *mafahiim Islamiyat fi al Tibb*. (b) strengthening faith, *iman*, through study of Allah's sign in the human body (c) appreciating and understanding the juridical, *fiqh*, aspects of health and disease, *al fiqh al tibbi*. (d) understanding the social issues in medical practice and research and (e) Professional etiquette, *adab al tabiib*, from the Islamic perspective.

We feel that IIC helps the future physician prepare for the heavy trust, the *amanat* of being professionally competent. He must be highly motivated. He must have personal, professional, intellectual, and spiritual development programs. He must know the proper etiquette of dealing with patients and colleagues. He also must know and avoid professional malpractice. He needs to be equipped with leadership and managerial skills to be able to function properly as a head of a medical team.

Derivation Of Medical Ethics From The *Maqasid Al Shari'at*

In my view the most significant aspect of IIMC is the derivation of medical ethics from Islamic sources as an alternative to western sources. The full impact of this will be appreciated in due course when these ideas become widely adopted.

Secularized European law denied moral considerations associated with 'religion' and therefore failed to solve issues in modern medicine requiring moral considerations. This led to the birth of the discipline of medical ethics that is neither law enforceable by government nor morality enforceable by conscience. On the other hand, Islamic Law is comprehensive and encompasses moral principles directly applicable to medicine.

The theory of medical ethics in Islam should be based on the 5 purposes of the Law, *maqasid al shari'at*, that are also considered the 5 purposes of medicine, *maqasid al tibb*. The 5 purposes are preservation of religion and morality, *hifdh al ddiin*; preservation of life and health, *hifdh al nafs*; preservation of progeny, *hifdh al nasl*; preservation of intellect, *hifdh al 'aql*; and preservation of wealth, *hifdh al maal*. Any medical action must fulfill one of the above purposes if it is to be considered ethical. If any medical procedure violates any of the 5 purposes it is deemed unethical.

In practical detailed situations, legal axioms called Principles of the Law or *qawa'id al shari'at* need to be used to resolve mostly situations of apparent conflict between *maqasid* or to assist logical reasoning. Principles of the Law, *qawa'id al shari'at*, when applied to the medical area can also be referred to as Ethical Principles of Medicine, *qawa'id al tibb*. The basic ethical principles of Islam relevant to medical practice be derived from the 5 principles of the Law, *qawa'id al shari'at*, that are: intention, *qasd*; certainty, *yaqeen*; injury, *dharar*; hardship, *mashaqqat*; and custom or precedent, *'aadat*. The *maqasid* and *qawa'id* are used in a synergistic way. The basic purpose of *qawa'id* is to provide robust rules for resolving situations of conflict between or among different *maqasid*.

The challenge before Muslim physicians is to liberate themselves from confusing and inconsistent European ethical theories and principles and instead to work hard to develop specific regulations for various medical interventions, *dhawaabit al tibaabat*, by a renewal of *ijtihad*. This *ijtihad* will be based on primary sources of the Law (Qur'an and sunnat), secondary sources of the Law based on transmission, *masaadir naqliyyat* (*ijma* and *qiyaas*); secondary sources of the Law based on reason, *masaadir 'aqliyyat* (*istishaab*, *istihsaan*, & *istilaah*); the purposes of the Law, *maqasid al shari'at*; principles of the Law, *qawa'id al fiqh*; as well as regulations of the Law, *dhawaabit al fiqh*.

In the early period of medical jurisprudence (0-1400 H) most issues could be resolved by direct reference to the primary

sources. In the middle period (1401 – 1420 H) issues were resolved by using *ijma*, *qiyaas*, *istishaab*, *istihsaan*, & *istilaah*. In the modern period (1420 -) medical technology is creating so many issues whose resolution will require a broad bird's eye-view approach that can only be found in the theory of *maqasid al shari'at*.

Appendix #1: Topics Of Iimc In 2004/2005

YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5
BLK 1: 'AQIDAT	BLK 1: LIFE & HEALTH	BLK 1a: ELEM CLINIC	BLK 1: MED TECHN	BLK 1: FORMATION
Intro to Islamic Input	Life, <i>al hayaat</i> ,	History Taking	Assisted Reproduction	The study circle
<i>Islam, Iman, & Ihsan:</i>	Death, <i>al mawt</i>	Physical Exam & Invest	Contraception	Self study of Qur'an,
<i>Tauhid</i>	Health, <i>al sihhat</i>	Adab: Patient & Families	Reproductive cloning:	Motivation in Islam
<i>Risalat</i>	Disease, <i>al maradh</i>	Adab Health Care Team	Abortion	Medical Education
<i>Akhirat</i>	Disease treatment, <i>al tibaabat</i>	Adab: with the Dying:	Artificial Life Support	Personal Development
<i>Qadar</i>	<i>al tasawwur al Islami</i>		Euthanasia	Skill Develop Program
<i>'Ubudiyat</i>		BLK 1b: LAW/ ETHICS	Organ Transplant	Quality Culture
<i>Tazkiyat al Nafs</i>	BLK 2: GROWTH	Over-view	Stem cell transplant	
<i>Ihm & Ghufuran</i>	Intra-uterine Life, :	Sources of the Law	Cosmetic Surgery	BLK 2a: LEADERSHI
<i>Kufr & Shirk</i>	Infancy & Childhood:	Purposes and Principles	Animal Research	Basic characteristics:
<i>Al Milal wa al adyaan</i>	Youth	Purposes & Princp of Med	Human Research	Attributes and functions
Concept of 'Ubudiyah:	Middle Age	Medical Procedures:	Research Practice	Diseases of leaders
	Old Age	Research Procedures:	BLK 2a: TRANSAC T	Communication
BLK 2: 'ILM		Physician Conduct:	Medical malpractice:	Negotiation
Nature of Knowledge		Professional Misconduct:	Marriage	Value-based Leadership:
Crisis of Knowledge:	BLK 3: BNO MIRACLE		Divorce & annulment:	BLK 2b: LEADERS
Method of Knowledge	Perfection in Anatomy		Inheritance	The Prophet
Classical Islam Sciences	Perfection in Physiology	BLK 2: FIGH 'IBADAT	Sales	The righteous khulafa
History of Med Sciences:	Perfection in Biochemistry	<i>Taharat:</i>	Personal Loans	Political leaders
Islamization of Med Science	Control & Homeostasis	Rulings on Salat	Investments	Social role models
Islamization: Other Disciplin	Interaction with the Environ	Physical Acts of Salar	Endowments	Scholars and reformers

YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5
Islamic Educ in SE Asia	Epidemiology & Statistics:	Special Types of Saalat	BLK 2b: CRIMES	Multicultural society
	Modernization:	Saalat in Difficulties	Crimes	BLK 3a: MGMT
		Saum	Legal competence:	Principles and concepts
BLK 3: TARIKH	BLK 4: STRU & FUNC	<i>Zakat</i>	Pleas, & evidence	Strategy
Creation of the Universe I	Alimentary System	<i>Hajj</i>	Judgment, conviction,	Planning & implementat
Creation of the Universe II:	Locomotor System		BLK 3: SOC INSTITU	Control and evaluation
Creation of the Human I:	Protective Systems	BLK 3: NORM CONDIT	Family 1: Gender	Decisions & Problems
Creation of the Human II:	Genito-urinary System	Menstruation	Family 2: Marital Rel	BLK 3b: RES MGMT
<i>Khilafat I:</i>	Cardio-respiratory System	Human Sexuality	Family 3:rels & Child	Time Management
<i>Khilafat II:</i>	Sensory System	Pregnancy and Delivery:	The Masjid	Financial management
<i>Tashkhir</i>	Nervous System	Breast feeding	<i>Takaful</i>	Information Management
<i>Imarat al Ardh</i>	Globalization	Hygiene	<i>Shu'ura</i>	Orgn management
Era of <i>Risalat</i> :		Foods & Drinks	<i>Maal</i>	Personnel management
Era of <i>Khilafat Raashidah</i> :		Activity, Rest, and Sleep:	BLK 4a: COM PROB	
Islam in the Malay World:			Lifestyle	
		BLK 4: PATH CONDITI	Sexual perversions	
BLK 4: CIVILIZATION		Uro-genital system	Addictions	
Concepts of Civilization:		Cardio-respiratory system:	Poverty	
Ancient Civilizations		Connective tissue system:	Violence	
Cycle of Civilization		Alimentary system: Dr	BLK 4b: SOC ACTS	
Umayyad Era:		Sensory systems:	<i>Dawa:</i>	
Abassid Era:		Gen systemic conditions:	<i>Amr & Nahy</i>	
Osmanli Era:		Psychiatric conditions	Social Change	
Other Muslim Civilizations:		Neurological conditions:	Professional orgs	
Achiev of Islamic Civilization		Age-related conditions:	Welfare and Disaster	
<i>Tajdid & Islah</i>				
A Common Civilization				

NB: Teaching material can be accessed at <http://omarkasule.tripod.com>

Appendix # 2

Curriculum For Year 1

Theme I: 'Aqiadat

Module 1.0: *Usuul Al Ddiin*

- 1.1 *Islam, Iman, & Ihsan*
- 1.2 *Tauhid*
- 1.3 *Risaalat*
- 1.4 *Aakhirat*
- 1.5 *Qadar*

Module 2.0: Aspects Of 'Aqiadat

- 2.1 *'Ubuudiyat*
- 2.2 *Tazkiyat al nafs*
- 2.3 *Ithm & Ghufran*
- 2.4 *Kufr & Shirk*
- 2.5 *Milal*

Theme Ii: 'Ilm & Ma'arifat (Knowledge)

Module 3.0: Theory Of Knowledge, *nadhariyyat al ma'arifat*

- 3.1 Nature of Knowledge, *tabi'at al ma'arifa'at*
- 3.2 Crisis of Knowledge, *azmat al ma'arifat*
- 3.3 Methodology of Knowledge, *manhajiyat al ma'arifat*
- 3.4 Classical Islamic Sciences, *al 'ulum al islamiyyat al taqliidiyyat*
- 3.5 Problem-based Learning in the Qur'an, *asbaab al nuzuul fi al qur'an*

Module 4.0: Islamization Of Knowledge, *islamiyyat al ma'arifat*

- 4.1 Concept of Islamization, *mafhuum islamiyyat al ma'arifat*
- 4.2 Islamization of Medical Sciences, *islamiyat al 'ulum al tibiyat*

Theme Iii: *Khalq* (Creation) [0.85 MB, 126pp]

Module 5.0: Creation Of The Universe, *khalq al kawn*

- 5.1 Nature, *tabi'at al kaun*
- 5.2 The Ultimate Questions, *al as ilat al nihaa iyyat*
- 5.3 Signs of Allah In The Universe, *aayaat al llaah fi al kawn*
- 5.4 Allah's Will, *iraadat al allah*
- 5.5 Order, Change and Permanence

Module 6.0: Creation Of The Human, *khalq al insan*

- 6.1 Creation of the Human Being, *Khalq Al Insan*
- 6.2 Nature of the Human, *Tabi'at Al Insaan*
- 6.3 Superiority of Humans, *Afdhaliyyat Al Insaan*
- 6.4 Mission of Humans on Earth, *Risalat Al Insan Fi Al Ardh*
- 6.5 Diversity of Humans, *Tafaawut Al Bashar*

Theme Iv & V: Taariikh**Module 7.0: Khilafa, Taskhiir, 'Imarat al ardh****Module 8.0: Cycle Of Civilizations, dawrat al hadhaaraat****Module 9.0: The Golden Era, 'ahad al risaalat & 'ahad al khilafat****Module 10.0: Era Of Dynasties, 'ahad al muluuk****10.5 Achievements of Muslim Civilization, injaazaat al hadharat al islamiyyat****Curriculum For Year 2****Theme Vi: Hayat, Sihhat, & Numuw (Life, Health, & Growth) Module****11.0: Life And Health, al hayat wa al sihhat**11.1 Life, *hayaan*11.2 Death, *mamaat*11.3 Health, *sihhat* & *'aafiyat*11.4 Disease, *maradh*11.5 Treatment of Disease, *tatbiib***Module 12.0: Growth And Senescence, numuw wa al shaykhuukhat**12.1 Intrauterine period, *fi al rahim*12.2 Infancy and Childhood, *tufuulat*12.3 Youth, *shabaab*

12.4 Middle Age,

12.5 Old Age, *shaykhuukhat***Theme Vii: Jism al Insan (The Organism: Structure & Function)****Module 13.0: The Biological Miracle, mu'ujizat al jism al insani**13.1 Perfection, Optimality, Incomparability, *kamaaaa al khalq*

13.2 Control and communication,

13.3 Homeostasis, *'itidal*

13.4 Interaction with the Environment

13.5 Pathological Processes: Repair & Restoration of Equilibrium

Module 14.0: Human Organ Systems14.1 Alimentary system, *ma idat*14.2 Locomotor Systems and Protective Systems, *hakat al jism wa himayatuhu*14.3 Genito-urinary and cardio-respiratory systems, *al qalb & tanaffus*14.4 Sensory system, *al hawaas*14.5 Nervous Systems, *al jihaaz al 'asabi***Curriculum For Year 3****Theme Viii: Usuul Al Shari'at (Foundations Of The Law)****Module 15.0: Sources, Purposes, Principles Of The Law**

15.1 Over-view

15.2 Sources of the Law, *masadir al shari'at*



Prof. Dr. Omar Hasan Kasule, Sr.
MB ChB (MUK); MPH & DrPH (Harvard)

Dr Kasule is a physician holding a doctorate in epidemiology from Harvard University. His doctoral research was on the Epidemiology of Childhood Epstein-Barr Virus Infection in Relation to the Risk of Burkitt's Lymphoma and Malarial Infection. He worked Harvard University as a Fellow teaching a course on Maternal and Child Health Services Delivery. He worked on cancer epidemiology projects at the Harvard Dana Farber Cancer Institute in Boston, Massachusetts on cancer clinical trials and analysis of cancer epidemiological data from the Eastern Cooperative Oncology Group (ECOG). He practiced clinical epidemiology as a Quality Assurance Consultant in the states of Maryland, Pennsylvania, and the District of Columbia (1990-1995). He was the principal investigator (1992-1993) of a National Survey of Sickle-Cell Disease Screening Project that was sponsored by the Sickle Cell Disease Branch of the National Heart, Lung and Blood Institute, a component of the National Institutes of Health, Bethesda, Maryland. He was at UIA Malaysia (1995-2005) where he held the appointments of Professor of Medicine, Deputy Dean for Research and Post Graduate, founding Chief Editor of the International Medical Journal (www-e-imj.com), and a consultant on statistical and epidemiological studies. He taught undergraduate courses on bio-statistics, epidemiology, and introduction to the study and practice of medicine that integrates social and ethical values into the medical curriculum. He has had 7 years' experience conducting Problem-based learning sessions for undergraduates. He joined the Faculty of Medicine of the University of Brunei since June 2005 as Professor of Epidemiology and Islamic Medicine. He teaches undergraduate courses on epidemiology, biostatistics, and medical ethics. He teaches postgraduate courses on advanced research methods and evidence-based health policy and practice. His current research interests in cancer prevention are evolving from traditional health education to using molecular epidemiological research to support chemoprevention strategies. He served as external examiner for the Master of Public Health (MPH) programs of the University of Malaya (2002-2006) as well as the Medical University of South Africa (2002-2006). He has been invited several times in the period 2000-2005, as external examiner of Masters and PhD students at the Department of Fiqh and Usul al Fiqh UIA Malaysia. Fluent in 6 languages, Dr Kasule has in addition to his medical work traveled to many countries conducting management programs for non-governmental organizations and community leaders over the past 24 years. He is a consultant for many hospitals and faculties of medicine in the South East Asia region on Islamic Medicine and integration of Islam in medical practice and teaching. His writings on these disciplines are available on www.pathagar.com