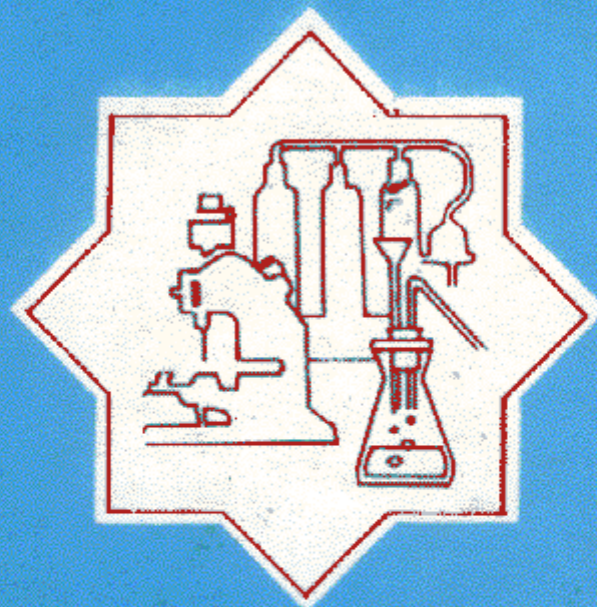


A.R.E.
Ministry of waqfs
The Supreme Council for Islamic Affairs

ISLAM AND SCIENCE

6

by
Prof. Dr M. G. El - Fandy
Head of the Committee of Experts



ALMUHARRAM 1413
JULY 1992

Under the Supervision of
Dr. Muhammad Ali Mahgoub

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**IN THE NAME OF ALLAH
AL—RAHMAN (THE BENEFICENT)
AL—RAHIM (THE MERCIFUL)**

FORWARD

It is a fact that Islam is up to now misunderstood by a great number of people, notably in the West. Unfortunately, this misunderstanding leads to hatred and even war since the Middle Ages. Some of the reasons are :

a) The Holy Qurân's interpretations are mostly literal and rarely convey the true meaning. See also P. 4 book (4).

b) The degeneration of the Muslim World. Refer also to book (3) PP. 54-58.

The principal aim from the present series is to make it clear, by scientific evidence, that the Holy Qurân is not of man's making, but Allah's final message to mankind comprising code for the whole humanity. In this sense the Holy Qurân says for example what means:

1. And it (the Holy Qurân) is no more than wiseness (wisdom) for all the worlds.

- Al Qualam (52)

(وَمَا هُوَ إِلَّا ذِكْرٌ لِلْعَالَمِينَ)

القلم (٥٢)

2. And We sent it (the Holy Qurân) in truth and in truth has it descended; and We sent thee but to give glad tidings and to warn (people).

- Al-Israa (105)-

(وَبِالْحَقِّ أَنْزَلْنَاهُ وَبِالْحَقِّ نَزَّلٌ وَمَا أَرْسَلْنَاكَ إِلَّا مُبَشِّرًا وَنَذِيرًا)

الاسراء (١٠٥)

3. And Verily it (the Holy Qurân) has been sent down by the Master of all the worlds-

Al-Shuaraa (192)

(وَإِنَّهُ لَنَزِيلُ رَبِّ الْعَالَمِينَ)

الشعراء (١٩٢)

4. No falsehood can approach it (the Holy Qurân) from before or from behind it, it is sent down by Hakim (One full of wisdom) Hamid (One worthy of all praise).

- Fussilat (42) -

(لَا يَأْتِيهِ الْبُطْلُ مِنْ بَيْنِ يَدَيْهِ وَلَا مِنْ خَلْفِهِ نَزِيلٌ مِنْ حَكِيمٍ حَمِيدٍ)

فصلت (٤٢)

5. O people of the Book (Jews and Christians) there has come to you our apostle (Muhammad), clearing to you much that you used to hide in the book, and passing over much. There has come to you from Allah Light (the Holy Qurân) and a perspicuous Book.

- Al-Maida (15)

(يَا أَهْلَ الْكِتَابِ قَدْ جَاءَكُمْ رَسُولُنَا يُبَيِّنُ لَكُمْ)

كثيراً مما كنتم تخفون من الكتاب ويعفو عن كثير قَدْ جَاءَكُمْ

مِنَ اللَّهِ نُورٌ وَكِتَابٌ مُبِينٌ)

المائدة (١٥)

ALLAH REVEALS HIMSELF IN THE QURAN AND THE UNIVERSE

I- INTRODUCTION

A great number of verses in the Holy Qurân are in fact, mainly scientific, dealing with various aspects of science. Some examples have been given in books (1 to 5) of the present series «Islam and Science» . At least in our Age of Science such verses bear testimony that the Holy Qurân is an Eternal Miracle. Amazingly enough, Muhammad- prayers and peace be upon him- was unlettered, and there is no way, whatever, to regard those (scientific) verses as Muhammad's own words, Infact, Muhammad only conveyed the Messages of Allah to man on earth :

Say : O men! For sure I, am sent to you all as the Apostle of Allah to Whom belongs the dominion of the heavens and the earth: There is no god but He. It is He Who offers life and death. So believe in Allah and His Apostle, the unlettered prophet, who believes in Allah and His words, and follow him so that you may be guided.

- Al- Araf (158)

(قُلْ يَا أَيُّهَا النَّاسُ إِنِّي
رَسُولُ اللَّهِ إِلَيْكُمْ جَمِيعًا الَّذِي لَهُ مُلْكُ السَّمَوَاتِ وَالْأَرْضِ لَا إِلَهَ
إِلَّا هُوَ يُحْيِي وَيُمِيتُ فَآمِنُوا بِاللَّهِ وَرَسُولِهِ النَّبِيِّ الْأُمِّيِّ الَّذِي يُؤْمِنُ
بِاللَّهِ وَكَلِمَاتِهِ وَاتَّبِعُوهُ لَعَلَّكُمْ تَهْتَدُونَ)

- الأعراف (١٥٨) -

Practically little or no harmony was seen to exist between Islam- the monotheistic religion- and modern science until El-Fandy the

author of the present series- began to publish his work regarding this subject early in the sixties of this century.

Contrary to what happened, for example, to Galileo (1615) in the Christian world no measures, whatever, were taken against me in the Muslim World. While Galileo was tried on having followed Copernicus's discoveries regarding the earth's rotation, many Muslim writers followed me. At present, conferences are being held in many Muslim countries by specialists in the various branches of science in order to reveal their amazing achievements in this matter.

The greater part of the Quranic verses are either revealing (facts) concerning the universe, or urging man to uncover such facts:

1- Allah raises up (to ranks) those of you who believe and who have been granted Knowledge.....

- Al- Mujadala (11)-.

(۱-) رَفَعَ اللَّهُ الَّذِينَ آمَنُوا مِنْكُمْ وَالَّذِينَ أُوتُوا الْعِلْمَ دَرَجَاتٍ

المجادلة (۱۱)

2. We will show them Our signs in the (far) horizons and in themselves until it becomes manifest to them that it (the Qurân) is the (whole) truth...

- Fussilat (53)-

(۲-) سَنُرِيهِمْ آيَاتِنَا فِي الْأَفَاقِ وَفِي أَنفُسِهِمْ حَتَّىٰ يَتَّبِعِنَا لَهْمُ أَنَّهُ الْحَقُّ

فصلت (۵۳)

3. Did you not see that Allah sends down water from the sky thus We produce thereby fruits of varied hues and that in the mountains there are white and red tracts of different shades of

colour, and others of raven black colour? And of people and crawling creatures and cattle there are likewise different hues? Verily of all Allah's worshippers those who are imbued with knowledge fear Allah most. Verily Allah is Mighty Oft- Forgiving.

- Fatir (27-28)-

(أَلَمْ تَرَ أَنَّ اللَّهَ أَنْزَلَ مِنَ
 السَّمَاءِ مَاءً فَأَخْرَجْنَا بِهِ ثَمَرَاتٍ مُخْتَلِفًا أَلْوَانُهَا وَمِنَ الْجِبَالِ جُدَدٌ
 بَيضٌ وَحُمْرٌ مُخْتَلِفٌ أَلْوَانُهَا وَغَرَابِيبُ سُودٌ ﴿٢٧﴾ وَمِنَ النَّاسِ وَالذَّوَابِّ
 وَالْأَنْعَامِ مُخْتَلِفٌ أَلْوَانُهُ كَذَلِكَ إِنَّمَا يَخْشَى اللَّهَ مِنْ عِبَادِهِ الْعُلَمَاءُ
 إِنَّ اللَّهَ عَزِيزٌ غَفُورٌ)

فاطر (٢٧-٢٨)

4. Allah is He Who sends forth the winds so that they raise clouds....

- Al- Roum (48)-

(اللَّهُ الَّذِي يُرْسِلُ الرِّيحَ فَتُبْرِسِحَابًا)
 الروم (٤٨)

This verse postulates for the first time that clouds are formed by air currents (winds). Only recently, in the Age of Science, we became aware of the fact that air may move either horizontally or vertically, or even in both directions together. We also became aware of the fact that clouds are formed when moist air rises in the atmosphere.

When air rises its temperature decreases under the effect of the so-called adiabatic cooling, or cooling by mere decrease of pressure. Air holds and carries with it water- vapour. As air cools down its

ability to hold water- vapour decreases until it becomes saturated or it becomes no longer able to hold its content of water- vapour. This is the stage when condensation begins to take place. Condensation means the transformation of water-vapour into water- drops or ice crystals, according to the prevailing temperature. Clouds are nothing but aggregations of water- drops in bottom and ice crystals on tops.

II. DETAILED

SCIENTIFIC COMMENTS CONCERNING SOME SELECTED VERSES

1. INTRODUCTION

In addition to the various verses selected in books (1-5) of this series in order to illustrate the scientific attitude in Islam, further verses are also given below and interpreted on detailed scientific basis in order to reveal and assure the fact that the Holy Qurân still proves to be miraculously convincing in the Age of Science:

a- And indeed We have put forth for people in this Qurân every sort of parable...

- Al- Zumar (27)-,
- Al- Israa (89)-,
- Al- Roum (58).

أ — (وَلَقَدْ ضَرَبْنَا لِلنَّاسِ فِي هَذَا الْقُرْآنِ مِنْ كُلِّ مَثَلٍ)

— الزمر (٢٧) —

(وَلَقَدْ صَرَّفْنَا لِلنَّاسِ فِي هَذَا الْقُرْآنِ مِنْ كُلِّ مَثَلٍ فَأَبَى أَكْثَرُ النَّاسِ
إِلَّا كُفُورًا)

— الاسراء (٨٩) —

(وَلَقَدْ ضَرَبْنَا لِلنَّاسِ فِي هَذَا الْقُرْآنِ مِنْ كُلِّ مَثَلٍ وَلَئِنْ جِئْتَهُمْ بِآيَةٍ لَيَقُولُنَّ
الَّذِينَ كَفَرُوا إِنْ أَنْتُمْ إِلَّا مُبْطِلُونَ)

— الروم (٥٨) —

b- We have ignored not any (subject) matter in the Book...

- Al- Anaam (28)-
(مَا فَرَطْنَا فِي الْكِتَابِ مِنْ شَيْءٍ)

الانعام (٢٨)

C- We shall show them our portents (signs) in the horizons and within themselves until becomes manifest to them that it (the Qurân) is the (whole) truth...

- Fussilat (53)-
(سُرِّيهِمْ آيَاتِنَا فِي الْأَفَاقِ وَفِي أَنْفُسِهِمْ حَتَّىٰ يَتَّبِعِنَا لَهُمْ أَنَّهُ الْحَقُّ)

فصلت (٥٣)

Compact review concerning the scientific details of some Quranic verses are given below :

2. EXPANSION OF THE UNIVERSE (HEAVENS)

With power and skill did We construct the heavens and indeed We are expanding them.

-Al-Zariyat (47)
(وَالسَّمَاءَ بَنَيْنَاهَا بِأَيْدٍ وَإِنَّا لَمُوسِعُونَ)
الذاريات : ٤٧

This verse reveals a number of scientific achievements and discoveries realized long time after revelation.

To grasp an idea concerning the present size of the universe, let us consider a model in which the sun is represented by a ball 15 cms in diameter. In spite of this enormous reduction of scale the model

of the solar system reduces to the area of a small village. On this same scale our earth is represented by a particle of dust, and the nearest stars in our galaxy (the Milky Way) are 300 kilometers away !

Light, which travels with the speed of 300,000 kilometers per second, takes five hours to travel along a diameter of the entire space occupied by the members of the Solar System (from one end to the other). Only part of the Solar System could be observed by the naked eye at the time of revelation. That part included, in addition to the sun and the moon, the planets : Mercury, Venus, Mars, Jupiter and Saturn. It was only lately, long after the discovery of the telescope, that the other members of the Solar System namely Uranus, Neptune and Pluto could be discovered, and thus the visible limits of our Solar System (and consequently heavens) expanded.

Again, the so-called fixed stars were generally regarded as lamps fixed in heavens !! In fact, they appear to be fixed because of their large distances away from us. Light takes several years to travel to us from the nearest stars. By means of telescopes many stars in the Milky Way (our galaxy) have been recently observed to lie at distances as much as 100,000 light years. A light year is the distance covered by light in one year. With improving telescopes the visible limits of the universe (and consequently heavens) gradually expanded !!

Our sun lies at about 35,000 light years from the edge of the galaxy. It runs in space at a speed of about 65000 kilometers per hour. Naturally, all the members of the Solar System follow it in this motion. However, the Holy Qurân says what means :

And the sun runs its course for a period determined for it : That is the decree of (Allah) Al-Aziz (the Exalted in Might) Al-Alim (the All-Knowing).

-Yasin(38)-

(وَالشَّمْسُ تَجْرِي لِمُسْتَقَرٍّ لَهَا ذَلِكَ تَقْدِيرُ الْعَزِيزِ الْعَلِيمِ)

يس : (٣٨)

It is now accepted in astronomy that our universe is a universe of galaxies. It is composed of billions of galaxies. The nearest galaxy to our own galaxy (the Milly Way) is called Andromeda. It lies at about 750,000 light years from the Milky Way !

It has also been finally accepted that galaxies are receding away (from us and from each other) at increasing velocities into the deep space, which means that the universe is expanding !! This result was first established by the Theory of Relativity and then confirmed by actual observations !!

Finally, a galaxy at a remote distance from us (exceeding ten billion light years) appears as a single star only ! Galaxies of this type are called quasi-stars. They have been discovered recently, and are studied by means of the so-called radio-telescopes.

Amazingly and miraculously enough, the Holy Qurân refers to such stars at remote distances from us and says what means :

Indeed I could swear by the sites of the stars. And it is a great oath if you are aware of them.

-Al-Waqiaa (75-76) -

(فَلَا أُقْسِمُ بِمَوَاقِعِ النُّجُومِ ۗ وَإِنَّهُ لَقَسَمٌ لَّو تَعْلَمُونَ عَظِيمٌ)

الواقعة (٧٥ ، ٧٦)

3. THE FRESH-WATER CYCLE ON EARTH

The fact that, contrary to any other planet, not less than three quarters of the earth's surface is covered with water, suggests that in the early stages of the development of the solar system, our earth gathered relatively great amounts of water constituents. Also it must have had thick cover or atmosphere which acted as a ceiling effective in checking diffusion of water vapour upward into empty space.

It was only in the Age of Science that man became aware of the fact that the relatively great amount of water on earth was not in vain. Water plays an essential role in helping life to nourish and flourish against some natural hazards on earth. Allah says what means :

And We sent down water from the heavens according to a precise measure and thereby We caused the earth to hold it.....

-Al-Mouminooneen (18)-

(وَأَنْزَلْنَا مِنَ السَّمَاءِ مَاءً بِقَدَرٍ فَأَسْكَنَتْهُ فِي الْآرْضِ)

المؤمنون (١٨)

Refer also to Book 3 p. 36, and Book 1 pp. 11-12.

At present the earth's atmosphere is composed of a mixture of nitrogen (about 80 per cent by volume) and oxygen (about 20 per cent by volume), in addition to small amounts of rare gases and variable amounts of water vapour. its lowest layer (the troposphere).

The atmosphere extends vertically to about 1000 Kilometer above the earth's surface. It renders vital services to living creatures on earth (both the plant and the animal kingdom). — Refer to Book 3 pp. 7-8 and Book 4 p. 55. — According to the vertical distribution of temperature in the atmosphere, it can be divided into several distinct layers, including the known ozonosphere and the ionosphere above 100 kilometers with its strata which reflect back the radio-waves and render radio-communication possible on earth.

Again, the atmosphere obeys the laws of thermodynamics and as mentioned before air cools and its temperature decreases by mere decrease of pressure by ascent. (Refer to Book 2 p. 10). When the temperature of the rising air decreases its ability to hold water vapour decreases, until a stage is reached when condensation takes place on the so-called nuclei of condensation which are also carried up from the land and sea surfaces by rising air currents. They are mainly sea-salts or rock salts in the form of very small particles on which condensation begins. Allah Says what means :

And We send the winds seeding (the clouds) and thereby cause water to precipitate down from the sky thus providing you with it to drink....

-Al-Hijr (22)-

(وَأَرْسَلْنَا الرِّيحَ لَوَاقِحَ فَأَنْزَلْنَا مِنَ السَّمَاءِ مَاءً فَأَسْقَيْنَاكُمُوهُ)

الحجر (٢٢)

The fresh water - cycle begins when rain (or snow, hail...) falls on large scales and supplies the various water sources with fresh water. Surplus water runs through rivers, canals..., and subsoil water pours back again, into the ocean and the sea, and a new fresh water-cycle starts again with the evaporation of water from the extensive water-surfaces on earth, comprising supplying the atmosphere with ample of water vapour.

The declaration of the cycle was first announced by the Holy Qurân which says what means :

And We send the winds seeding (the clouds) and thereby cause water to precipitate from the sky thus providing you with it to drink, and you are not storing it.

-Al-Hijr (22)-

(وَأَرْسَلْنَا الرِّيحَ لَوَاقِحَ فَأَنْزَلْنَا مِنَ السَّمَاءِ مَاءً فَأَسْقَيْنَاكُمُوهُ وَمَا أَنْتُمْ لَهُ
وَبِخَزَائِنِ)
الحجر (٢٢)

The last statement in this verse as translated in Book 1 p. 21 and in Book 2 p. 8, does not follow the exact wording quoted by the Holy Qurân. The present interpretation (and you are not storing it) is more representative.

4. SURAT (CHAPTER) AL-FALAQ (THE SPLITTING ORGANISM)

According to the author's own interpretation, this chapter is readable as follows :

Say I seek refuge with the help of the Master of Al-Falaque (the splitting organisms). From the mischief of such things He created. And from the mischief of pus over spreading (in the body). And from the mischief of the organisms which mingle with the knots (glands). And from the mischief of an envious when practicing envy.

-Al-Falaque-

(قُلْ أَعُوذُ بِرَبِّ الْفَلَقِ ۝١ مِنْ شَرِّ مَا خَلَقَ ۝٢ وَمِنْ شَرِّ غَاسِقٍ إِذَا وَقَبَ ۝٣
وَمِنْ شَرِّ النَّفَّاثِ فِي الْعُقَدِ ۝٤ وَمِنْ شَرِّ حَاسِدٍ إِذَا حَسَدَ)
الفلق (١ - ٥)

Probably no body did not experience suffering on some scale from envy. It has not yet received any reasonable explanation.

Amongst the well-known splitting organisms is bacteria. The word was originally applied by microscopists to organisms shaped like rods, apparantly belonging to the lowest orders of plant life. The term today is used to express a great variety of organisms.

Multiplication of bacteria occurs by mere splitting or direct division of the cell, hence the name (splitting organisms). It is estimated that under favourable conditions of food supply and temperature, the total number of bacteria resulting from one cell in 24 hours is :

75,000,000,000,000,

or 75×10^{12} !!

Pus is collection of dead white blood corpuscles resulting from inflammation and suppuration by various types of bacteria.

Natural reaction of living tissue to an injury is inflammation. It is essentially a protective process which helps to prevent the effects of an injury from spreading. The most frequent cause of inflammations is infraction of the tissues by micro-organisms, and is followed by the accumulation of pus. Inflammation may, on spreading gives rise to fever and other constitutional symptoms.

As regard glands, they can be described as knots of tissues. There are two types of glands : The ductless and the duct glands. As the name signifies, the latter have small ducts or pipes leading to outer organs. Their functions are fairly well known and understood. To this class belong the secreting and digestive glands.

The liver is the largest gland in the body. Bile is secreted from it and poured into the intestines as is the pancreatic juice from the pancreas.

The mysterious ductless glands also secrete substances called hormones, but they have no distributing pipes. The sex glands are located in the ovaries in women and in the testes in men.

Glands are referred to in the Holy Qurân (Chapter Al-Falaq) by the word knots.

Finally, a group of infecting agents producing diseases in animal, plant and man is called virus. This group is too small to be seen by optical microscopes.

5. THE SOLAR SYSTEM

Essentially, the Solar System consists of : The sun, the planets including their satellites such as the earth's moon, comets, meteorites and meteors. As mentioned before, light takes five hours to cross the space occupied by the entire system. According to the Holy Qurân, the system is qualified to render free services to man on earth :

And He (Allah) has subjected to you freely all that is in the heavens and that is in the earth.....

-Al-Jathiya (13)-

(وَسَخَّرَ لَكُمْ تَمَّا فِي السَّمَوَاتِ وَمَا فِي الْأَرْضِ جَمِيعًا)
الجمانية (١٣)

As a result of the outstanding services rendered freely to man by both the sun and the moon it happened that man, in some ancient civilizations, used to worship them. However, Allah says what means :

Prostrate not the sun and the moon, but adore Allah who created them....

-Fussilat :(37)-

(لَا تَسْجُدُوا لِلشَّمْسِ وَلَا لِلْقَمَرِ وَاسْجُدُوا لِلَّهِ الَّذِي خَلَقَهُنَّ)
فصلت (٣٧)

As mentioned in Book 5 p. 11, Ibrahim — the Father of the Prophets — was directed by Allah to observe carefully an occasion of total solar eclipse which happened to pass over Ore (Ibrahim's town) at that time. It was only natural for Ibrahim to realise, on solid basis of actual observation, that the sun, the moon and the planets were mere heavenly bodies created by their Master (Allah). Allah says in this respect what means :

So also did We show Ibrahim the nature and wonders of the heavens and the earth that he might have certitude.

-Al-Anaam (75)-

وَكَذَلِكَ نُرِي إِبْرَاهِيمَ مَلَكُوتَ السَّمَوَاتِ وَالْأَرْضِ وَلِيَكُونَ مِنَ الْمُوقِنِينَ

(الأنعام (٧٥))

Miraculously enough, the Holy Qurân also mentions that will come the time when man becomes able to travel within the space occupied by the Solar System, from the earth to the other planets and the moon. However, this has now been practically achieved after sufficient progress in science and technology. The Holy Qurân says what means :

(a) O company of jin and men, if you can penetrate through the diameters of the heavens and the earth then do penetrate; you will not penetrate save with power and authority.

-Al-Rahman (33)-

(يَمَعَشِرَ الْجِنَّ وَالْإِنْسِ إِنْ أَسْنَطَعْتُمْ أَنْ تَنْفُذُوا مِنْ أَقْطَارِ السَّمَوَاتِ
وَالْأَرْضِ فَأَنْفُذُوا لَا تَنْفُذُونَ إِلَّا بِسُلْطَانٍ)

(الرحمن (٣٣))

(b) And if We opened out for them a gate from heaven and they continued therein yaarujoon (ascending curvilinearly), they would say : "But our sights have been intoxicated ! Nay, we have been

men bewitched by sorcery.

Al-Hijr (14-15)-

ب (وَلَوْ فَتَحْنَا عَلَيْهِم بَابًا مِّنَ السَّمَاءِ فَظَلُّوا فِيهِ يَعْرُجُونَ ﴿١٤﴾ لَقَالُوا إِنَّمَا
سُكَّرَتْ أَبْصَارُنَا بَلْ نَحْنُ قَوْمٌ مَّسْحُورُونَ)

الحجر (١٤-١٥)

(c) By the moon in her fullness. For sure you shall ride a saucer (vessel) after a saucer.

-Al-Inshiqaq (18-19)-

(وَالْقَمَرَ إِذَا تَسَّقَنَ ﴿١٨﴾ لَتَرْكَبُنَّ طَبَقًا عَن طَبَقٍ)

الانشقاق (١٨-١٩)

Actually the first verse is an adjuration. The two verses together form a hint (or prediction) concerning man trips to the moon in the Age of Space. Notice that the substantive statement concerning the adjuration follows directly : And the moon in her fullness.

6. THE SUN

Our sun is the only self-luminous body in the entire Solar System. Moonlight results from the reflection of sunlight back to space by the surface of the moon :

(a) It is He Who made the sun a shining glory and the moon a light....

-Yunus (5)-

٢ - (هُوَ الَّذِي جَعَلَ الشَّمْسُ ضِيَاءً وَالْقَمَرَ نُورًا)

يونس : ٥

(b) And We made a blazing lamp.

-Al-Nabaa : (13)-

النبا : (١٣)

ب - (وَجَعَلْنَا سِرَاجًا وَهَّاجًا)

(c) And He made the moon therein a light and made the sun a lamp.

-Nooh (16)-

﴿ وَجَعَلَ الْقَمَرَ فِيهِنَّ نُورًا وَجَعَلَ الشَّمْسُ سِرَاجًا ﴾

نوح (١٦)

(d) Blessed is He Who placed the constellations in heaven and placed therein a lamp and a moon giving light.

-Al-Furqan (61)-

﴿ تَبَارَكَ الَّذِي جَعَلَ فِي السَّمَاءِ بُرُوجًا وَجَعَلَ فِيهَا سِرَاجًا وَقَمَرًا مُنِيرًا ﴾

الفرقان (٦١)

The sun has double importance astronomically as follows :

1. It is the central body in the Solar System and contains

$$\frac{999}{1,000}$$

of its total mass, and therefore controls the motion of all the bodies in the system.

2. It is the nearest star to us and shows a disc which enables us to study the details of its surface.

People believe that the sun is like a sphere in shape. This is only apparent and is not true. Its true shape is observable only in occasions of total eclipse of the sun. It then looks like an irregular cloud with wavy boundaries.

It will become a sphere on the Last Day, after it suddenly bursts or expands to reach the moon, and then shrinks to become a white dwarf !

Miraculously enough, the Holy Qurân postulates such events. There is no doubt that for life to survive on earth, the sun must

not catch the moon, or in other words the sun should not approach the earth.

Climatologically speaking, we say that for life to survive on earth the temperatures of its atmosphere and its surface must remain not far from their normal values, which is the prevailing condition now. When the sun catches the moon, the earth's temperatures exceed 100 °c ! However, such a drastic event will take place on the Last Day. Refer also to Book 3 pp. 45-46. In this respect the Holy Qurân miraculously says what means :

(a) It is not permitted to the sun to catch the moon, nor can the night outstrip the day, and each should swim along in an orbit.

أ — (لَا الشَّمْسُ يَنْبَغِي لَهَا أَنْ تُدْرِكَ الْقَمَرَ وَلَا اللَّيْلُ سَابِقُ النَّهَارِ
وَكُلٌّ فِي فَلَكٍ يَسْبَحُونَ)

يس (٤٠)

(b) He questions : When is the Day of Resurrection ?

-Al-Quiyama (6)-

ب — (يَسْأَلُ أَيَّانَ يَوْمَ الْقِيَامَةِ)

القيامة (٦)

(c) But when the sight is dazed.

-Al-Quiyama (7)-

ج — (فَإِذَا بَرِقَ الْبَصَرُ)

القيامة (٧)

(d) And the moon is eclipsed.

-Al-Quiyama (8)-

د — (وَحَسَفَ الْقَمَرُ)

القيامة (٨)

(e) And the sun and the moon are joined together.

Al-Quiyama (9)-
القيامة (٩) هـ (وَجُمِعَ الشَّمْسُ وَالْقَمَرُ)

(f) Man on that Day utters : Where could escape be !?

Al-Quiyama (10)-

القيامة (١٠) و (يَقُولُ الْإِنْسَانُ يَوْمَئِذٍ أَيْنَ الْمَفْرُ

The present volume of the sun is more than one million times that of the earth. Its outer radiating surface has temperature of 6000 degrees absolute. Inside the sun temperature exceeds 20 million degrees.

For the sun to become eclipsed it should be in line with both the moon and the earth. The moon will act like an obscuring screen which prevents sun-light from reaching limited areas on earth. In such areas one of three types of eclipses may occur, namely : Total eclipses, annular eclipse, and partial eclipse. Ibrahim observed an occasion of total eclipse in which the shadow cone of the moon just touched the earth's surface at a small zone as usual.

The sun is the source of energy on earth, while we are consumers of energy. The distribution of energy in the solar spectrum is such that : 9 per cent ultraviolet, 45 per cent light and 46 per cent heat. The earth's atmosphere is almost transparent to the light and to the heat received from the sun. The question arises : How can man feed on this energy in order to fulfil the demands of his body ?

This is achieved by an indirect process designed by Allah. During the day green plants absorb carbon-dioxide gas from the atmosphere, and in the presence of sunlight the green matter (the chlorophyl) reaction photosynthesis takes place between water and carbon dioxide gas to form food for the animal kingdom - Book 3 pp 39-40.

Concerning this fact one reads in the Eternal Miracle what means :

And it is He Who sends down water from the sky; with it We produce vegetation of all kinds, from which We produce green matter (khadira = chlorophyl) out of which We produce needed grain....

-Al-Anaam (99)-

(وَهُوَ الَّذِي أَنْزَلَ مِنَ السَّمَاءِ مَاءً فَأَخْرَجْنَا بِهِ نَبَاتَ كُلِّ شَيْءٍ فَأَخْرَجْنَا مِنْهُ خَضِرًا
نُخْرِجُ مِنْهُ حَبًّا مُتَرَاكِبًا .)

الأنعام (٩٩)

7. THE MOON

The moon is near enough to the earth (less than 400,000 kilometer). It is the fifth in diameter among other planetary satellites and its mass is only $\frac{1}{81}$ that of the earth. The full moon is next to the sun in brightness. The surface of the moon is very rough and brownish, mainly because the moon has no atmosphere. Her mountains are sometimes as high as Mount Everest. Craters are scattered everywhere.

The moon - like all planets and all other moons - shines by the sunlight which it reflects :

It is He (Allah) Who made the sun a shining glory and the moon a light.....

-Yunus (5)-

(هُوَ الَّذِي جَعَلَ الشَّمْسُ ضِيَاءً وَالْقَمَرَ نُورًا)

يونس (٥)

It is now agreed that the average lunar month is the mean time which the moon requires to perform one complete cycle round the earth. It is equal to :

29.550329

days.

The average solar year is the mean time which lapses in order that the earth might complete one cycle round the sun, and is equal to :

365.2422 days.

It is really amazing that the Holy Qurân transforms 300 solar years to be exactly equal to 309 lunar years. - Refer to Book 2 p. 36 - Allah says what means :

(a) And they remained in their cave three hundred years, a number which has to be increased by nine years.

-Al-Kahf (25)-

أ - (وَلَبِثُوا فِي كَهْفِهِمْ ثَلَاثَ مِائَةٍ سِنِينَ وَازْدَادُوا تِسْعًا) الكهف (٢٥)

(b) For sure, the number of months (per year) as regarded by Allah, is twelve months in the Book of Allah on the day He created the Heavens and the Earth.

-Al-Tawba (36)-

ب - (إِنَّ عِدَّةَ الشُّهُورِ عِنْدَ اللَّهِ اثْنَا عَشَرَ شَهْرًا فِي كِتَابِ اللَّهِ يَوْمَ خَلَقَ السَّمَوَاتِ

وَالْأَرْضِ) التوبة (٣٦)

Now, it is evident that :

309 lunar years are equal to :

$12 \times 309 \times 29.550329 = 109572.66$ days, and 300 solar years are equal to :

$300 \times 365.2422 = 109572.66$ days.

Amongst the most glorious signs of The Holy Qurân is its prediction that the moon will crack (or cleave) in the future. From the scientific point of view, such cleavage is expected in the far future. The tidal forces between the earth and the moon play an important role in the earth - moon system. If the moon approaches

the earth, under certain expected conditions, then the difference in gravitation on both sides of the moon can be sufficient to cleave or to crack it. The Holy Qurân says what means :

The Hour (the Last Day) is nigh and the moon is cleft (or cracked).

-Al-Quamar (1)-

القمر (١)

(أَقْرَبَ السَّاعَةَ وَأَنْشَقَّ الْقَمَرَ)

8. THE PLANETS

Nine planets are known up to now. Two other planets are expected to be discovered. At the time of revelation five planets only were known apart from the earth. Those planets were : Mercury, Venus, Mars, Jupiter and Saturn. Uranus, Neptune and Pluto have been discovered only recently. However, the Holy Qurân says what means :

(a) We have indeed adorned the lowest heaven with an ornament, the planets.

-Al-Saffat (6)-

٤ — (إِنَّا زَيَّنَّا السَّمَاءَ الدُّنْيَا بِزِينَةٍ الْكَوَاكِبِ)

الصفات (٦)

(b) Once Joseph said to his father : I have seen eleven planets and the sun and the moon I have seen them prostrating for me.

-Joseph (4)-

(إِذْ قَالَ يُوسُفُ لِأَبِيهِ يَا أَبَتِ إِنِّي رَأَيْتُ أَحَدَ عَشَرَ كَوْكَبًا وَالشَّمْسَ وَالْقَمَرَ رَأَيْتُهُمْ لِي سَاجِدِينَ)

يوسف (٤)

The second verse provides hint that there exist eleven planets. However, the tenth planet has already been subject to observation.

9. THE ASTEROIDS

Most of the asteroids travel in the space between the orbits of Mars and Jupiter, and form the belt of asteroids. It seems as though the asteroids have something to do with the source of meteorites.

Most asteroids are too small to form visible discs. A great number have diameters between 10 and 15 kilometer.

The following Quranic verse affords an amazing hint that at the beginning there were no asteroids within the Solar System. The verse says what means :

And indeed we (the ginn) used to sit there (in the lowest heaven) in selected stations in order to listen; but any one who listens now will find a meteorite facing him in ambush.

-Al-Ginn (9)-

(وَأَنَّا كُنَّا نَقْعُدُ مِنْهَا مَقْعِدَ اللَّسْمِيعِ فَمَنْ يَسْمَعُ الْآنَ يَجِدْ لَهُ شَيْئًا يَأْرَصِدًا)
الجن (٩)

The same hint is available from the Quranic verse which means :

And we (the ginn) pried into the secrets of the heaven, but we found it filled with stern guards (meteorites) and meteors.

-Al-Ginn (8)-

(وَأَنَا لَمَسْنَا السَّمَاءَ فَوَجَدْنَاهَا مُلْتِ حَرَسًا شَدِيدًا وَشُهَبًا)
الجن (٨)

The fact that meteorites rarely reach the earth's surface is amazing. Most of them, on entering the earth's atmosphere split asunder into fine dust within the upper layers of the earth's atmosphere. Allah says what means :

(a) And He withholds the (lowest) heaven lest it falls on the earth except with His permission. Indeed Allah, regarding peoples, is Most Kind Most Merciful.

-Al-Haj (65)-

وَيُسِـكُّ السَّمَاءَ أَنْ تَقَعَ عَلَى الْأَرْضِ إِلَّا بَإِذْنِهِ إِنَّ اللَّهَ بِالنَّاسِ
لَرَءُوفٌ رَحِيمٌ () ١

الحج (٦٥)

(b) And if they see bits of the heaven falling they utter :
Cumulative clouds !

- Al-Toor (44)-

(أَوَلَمْ يَرَوْا كِسْفًا مِّنَ السَّمَاءِ سَاقِطًا يَقُولُوا سَحَابٌ مَّرْكُومٌ) — ٢

الطور (٤٤)

Comets are members of the Solar System. The Holy Qurân refers to them and calls them by their most outstanding characteristics namely that : (1) They disappear for long periods - tens of years- before they reappear again. (2) Most of them have long tails and travel swiftly as though they sweep the sky ! Refer also to Book 2 pp. 34-36.

10. WE ARE NOT ALONE IN THE UNIVERSE

Are we alone in the universe ? This important question remains to be answered by scientists in their own way. However, no satisfactory answer has yet been reached, but the Holy Qurân declares in more than 35 verses that the heavens — away from the Solar System — are inhabited by wise beings. Most likely, they resemble human beings on earth in many aspects. For examples they should talk :

(a) He said : My Master (Allah) knows every word in the heaven and the earth....

-Al-Anbiyaa (4)-

(قَالَ رَبِّي يَعْلَمُ الْقَوْلَ فِي السَّمَاءِ وَالْأَرْضِ)
الأنبياء (٤)

(b) Seek they then other than Allah's religion, and to Him submits whoever is in the heavens and the earth.... ?

-Al-Imran (83)-

(أَفَغَيْرَ دِينِ اللَّهِ يَبْغُونَ وَلَهُ أَسْمَاءٌ مِّنَ السَّمَوَاتِ وَالْأَرْضِ)
ال عمران (٨٣)

(c) And your Master best knows those who are in the heavens and the earth....

-Al-Israa (55)-

(وَرَبُّكَ أَعْلَمُ بِمَن فِي السَّمَوَاتِ وَالْأَرْضِ) ج —

الاسراء (٥٥)

(d) There is none in the heavens and the earth but comes to Al-Rahman (the Beneficent) as a servant.

-Maryam (93)-

(إِنَّ كُلَّ مَن فِي السَّمَوَاتِ وَالْأَرْضِ إِلاَّ آتَى الرَّحْمَنَ عَبْدًا) د —

مريم (٩٣)

(e) Seest thou not that Allah is He Whom do glorify all those who are in the heavens and the earth.

-Al-Nur (41)-

(أَلَمْ تَرَ أَنَّ اللَّهَ يُسَبِّحُ لَهُ مَن فِي السَّمَوَاتِ وَالْأَرْضِ) ه —
النور (٤١)

(f) Say : No one in the heavens and the earth knows the unseen but Allah

-Al-Naml (65)-

و — (قُلْ لَا يَعْلَمُ مَنْ فِي السَّمَوَاتِ وَالْأَرْضِ الْغَيْبَ إِلَّا اللَّهُ)

النمل (٦٥)

(g) And the day when the trumpet is blown then those in the heaven and those in the earth will be struck with terror....

-Al-Naml (87)-

ز (وَيَوْمَ يُنْفَخُ فِي الصُّورِ فَفَزِعَ مَنْ فِي السَّمَوَاتِ وَمَنْ فِي الْأَرْضِ)

النمل (٨٧)

(n) And of His signs is the creation of the heavens and the earth and what He has spread forth in both of them of living beings; and He is All-Able to gather them together when He wills.

-Al-Shura (29)-

ل (وَمِنْ آيَاتِهِ خَلْقُ السَّمَوَاتِ وَالْأَرْضِ وَمَا بَيْنَهُمَا مِنْ دَابَّةٍ وَهُوَ

الشورى (٢٩)

عَلَىٰ جَمْعِهِمْ إِذَا يَشَاءُ قَدِيرٌ)

(i) And to Allah makes obedience every living creature that is in the heavens and that is in the earth, and the angels (too) and they are not proud.

- Al - Nahl (49) -

م (وَلِلَّهِ يَسْجُدُ مَا فِي السَّمَوَاتِ وَمَا فِي الْأَرْضِ مِنْ دَابَّةٍ وَالْمَلَائِكَةُ

وَهُمْ لَا يَسْتَكْبِرُونَ)

النحل (٤٩)

A great number of verses in the Holy Qurân express the same meaning : That we are not alone in the universe. However, logically speaking, one can argue that wherever suitable environments prevail on other planets in the universe, life can nourish and flourish with time. Naturally, such planets may be found only in Solar Systems other than ours.

In this field of space research the Holy Qurân stands unique. Amazingly enough it says what means :

... And ... He is All-Able to gather them together when He wills.

- Al - Shura (29)-

(وَهُوَ عَلَىٰ جَمْعِهِمْ إِذَا يَشَاءُ قَدِيرٌ)
الشورى (٢٩)

Does this not mean that beings similar to man exist on some other planets and should be able to communicate with each other by any means when Allah wishes ?!

Of course the verses quoted above need further discussion and explanation, which is beyond the scope of the present article. In fact, however, a whole chapter may be written by a scientist on each verse. The Holy Qurân does not deal with details of science in the manner available in our text-books.

11. TIME

It is the eastward turning of the earth that causes all celestial bodies to appear to travel westwards. For example, when we look at the stars it seems, as though we are situated at the centre of a large sphere - the celestial sphere - and with the passage of time, the sphere appears to turn slowly about us, carrying the stars along with it. The time the earth takes to make one complete rotation, round its axis as based on observing, the sun is the solar day, which is divided into 24 hours. There are 60 minutes in one hour, and 60 seconds in a single minute.

Evidently the duration of one day, and hence measurement of time should differ from one planet to another, which means that time is relative. Taking the earth's common year as a unit, the following table gives the duration of one year on the different planets of our solar system expressed in solar days or in years.

Planet	Duration of one year expressed in solar days or years
Mercury	88 days
Venus	225 days
Earth	1 year
Mars	1.88 years
Jupiter	11.9 years
Saturn	29.5 years
Uranos	84 years
Neptune	164.8 years
Pluto	250 years

In fact time is not an absolute entity. This (fact) has also been deduced from the Theory of Relativity. The Holy Qurân refers to this (fact) in various verses, such as :

(a) ... and a day in the sight of your Master is like a thousand years of your reckoning.

- Al - Haj (47)-

﴿ وَإِنَّ يَوْمًا عِنْدَ رَبِّكَ كَأَلْفِ سَنَةٍ مِّمَّا تَعُدُّونَ ﴾

الحج (٤٧)

(b) The angels and the spirit ascend (curvilinearly) unto Him in a day the measure whereof is like fifty thousand years.

- Al - Maarij (4)-

﴿ تَعْرُجُ الْمَلَائِكَةُ وَالرُّوحُ إِلَيْهِ فِي يَوْمٍ كَانَ مِقْدَارُهُ خَمْسِينَ أَلْفَ سَنَةٍ ﴾

المعارج (٤)

It is worth mentioning here that in Islam the lunar calender is followed. The birth of a new moon every new lunar month is a universal sign in the sky which can never be mistaken. It is born in the sky at one and single moment with respect to the earth's surface as a whole. This moment can be calculated carefully with great precision every month, but the possibility of observing the born crescent depends on the locality of the observer. Arafat's site is fixed for performing pilgrimage each year. Allah says what means:

They (the Arabs) ask you concerning the new moons. Say : They are but signs to mark reliable periods of time for men (anywhere) and for pilgrimage....

- Al - Baquara (189)-

﴿ يَسْأَلُونَكَ عَنِ الْأَهْلِ قُلْ هِيَ مَوَاقِيتُ لِلنَّاسِ وَالْحَجِّ ﴾

البقرة (١٨٩)

12. THE ARCTIC CIRCLE

In book 1 P.12 of the present series a short account has been given concerning the Quranic verse which says what means :

Until when he reached the land of sun rise he found it rising on a people for whom We had provided no covering shelter against the sun.

- Al - Kahf (90)-

(حَتَّىٰ إِذَا بَلَغَ مَطْلِعَ الشَّمْسِ وَجدهَا تَطَّلِعُ عَلَىٰ قَوْمٍ لَمْ يَجْعَلْ لَهُم مِّن دُونِهَا سِتْرًا)

الكهف (٩٠)

The amazing significance of this verse becomes clear the moment one realizes the fact that it throws light on the Arctic Circle, notably because, at least up to the time of revelation, the Arabs knew nothing about the Arctic Circle and never mentioned it in their traditions.

The areas which surround the earth's geographical poles are known as the polar regions. They are limited respectively by the Arctic and Antarctic Circles.

At the spring equinox (March) the N. Pole begins its (day) which lasts for half a year until the autumnal equinox begins in September. On midsummer (day) in June, there is no sunset visible anywhere within the Arctic Circle. Between this Arctic Circle and the N. Pole are periods without a single sunset lasting 24 hours to six months. The nearer the pole the larger the period.

The king who reached the land of sunrise was, according to the Holg Quran called Zul-Quarnain, or the man of the two horns. The expression refers to a natural phenomenon observable in the Arctic Circle. However, this seems to be beyond our present horizon.

13. MOUNTAINS

Mountains generally refer to elevated portions of the earth's crust which is forever undergoing changes by warping, fracture and weathering. This complex of activities, shown in process but cumulative in effect, produces the variations in elevation to which mountains are generally due.

In the simplest cases, mountains are also due to actual building, such as volcanic cones and volcanic outbursts.

During geological times the earth has decreased in volume, and its crust has adjusted itself to the changing conditions and has thus produced crinkles, the result of tangential wrapping strains produced continuously during the adjustment. The most recent crinkles are the great mountain ranges. Here the strata of the crust are contorted simply as great up and down folds, or complexity with folds, fractures and the overthrust of one mass of rock over another.

The above scientific brief account concerning mountains and their functions regarding the stability of the earth's crust amazingly matches the outstanding hints which the Holy Qurân mentions as follows:

(a) STABILITY OF THE EARTH'S CRUST

Allah says what means :

1- And He (Allah) has cast into the earth mountains standing firm lest it (the earth) should shake with you and rivers and roads that you may guide yourselves.

- Al - Nahl (15)-

﴿وَأَلْقَى فِي الْأَرْضِ رَواسِيَ أَن تَمِيدَ بِكُمْ وَأَنْهَارًا وَسُبُلًا لَّعَلَّكُمْ تَهْتَدُونَ﴾

النحل (١٥)

b- And We made in the earth mountains standing firm lest it should shake with them ...

Al- Anbiyaa (31)-

ل - (وَجَعَلْنَا فِي الْأَرْضِ رَوَاسِيَ أَنْ تَمِيدَ بِهِمْ) - الانبياء (٣١)

C. And We made in it (the earth) high mountains standing firm and provided for you wholesome fresh water.

- Al - Mursalat (27)-

ح - (وَجَعَلْنَا فِيهَا رَوَاسِيَ شِمَخَاتٍ وَأَسْقَيْنَاكُمْ مَاءً فُرَاتًا) - المرسلات (٢٧)

(b) OVER - THRUST OF ONE MASS OF ROCK OVER ONE ANOTHER

The Holy Qurân, regarding the rôle played by mountains in controlling this effect, says for example What means :

(a) And the mountains He (Allah) has layed them firmly (to the earth).

- Al - Naziaat (32)-

پ - (وَالْجِبَالِ أَرْسًا) - النازعات (٣٢)

(b) And the mountains (have We not made them) like pegs ?

- Al - Naba (7)-

ل - (وَالْجِبَالِ أَوْتَادًا) - النبا (٧)

14. CLOUDS AND PRECIPITATION

The study of the global winds, or the so-called air in its ways, forms an important branch of meteorology. Again, as mentioned in Book I PP 17-21, Allah says what means :

(a) .. and in the turning about of winds and the clouds compelled between the sky and the earth surely there are signs for a people who understand.

- Al - Baquara (164)-

(وَتَصْرِيفِ الرِّيحِ وَالسَّحَابِ الْمُسَخَّرِ بَيْنَ السَّمَاءِ وَالْأَرْضِ لآيَاتٍ لِّقَوْمٍ يَعْقِلُونَ) P
البقرة (١٦٤)

(b) ... and in the turning about of winds there are signs for a people who understand.

- Al - Jathiya (5)-

(وَتَصْرِيفِ الرِّيحِ آيَاتٍ لِّقَوْمٍ يَعْقِلُونَ) - C
الجاثية (٥)

See also book 3 P.P. 29-33

Miraculously enough, the Holy Qurân announced and declared for the first time on earth the scientific fact that clouds are formed by winds, which of course include rising air :

(a) And Allah is He Who sent forth the winds so that they raised up the clouds, and He drove them to a dead land

Fatir (9)-

(وَاللَّهُ الَّذِي أَرْسَلَ الرِّيحَ فَتُثِيرُ سَحَابًا فَاَسْقِنَهُ إِلَىٰ اَبْدَانٍ مَّيْتَةٍ) P

فاطر (٩)

(b) Allah is He Who sends forth the winds that they raise clouds then does He spread them

- Al - Roum (48)-

ب- (اللَّهُ الَّذِي يُرْسِلُ الرِّيحَ فَتُثِيرُ سَحَابًا فَيَبْسُطُهُ)
الروم (٤٨)

Amazingly enough, the Holy Qurân distinguishes between two types of clouds as they actually exist in nature, and gives them the names which are exactly the same as the two names used now in meteorology ! These two types are : (a) The stratus clouds which grow horizontally in single layers or strata and (b) The cumulus clouds which grow vertically up. Rainy clouds are generally called by the Holy Qurân (muzn) which means nimbus, and we have nimbo- stratus and cumulo - nimbus rainy clouds. In such respects the Holy Qurân says what means :

(a) Stratus type :

Allah is He Who sends forth the winds so that they raise clouds then He spreads them in the sky as He wishes

- Al - Roum (48)-

ب- (اللَّهُ الَّذِي يُرْسِلُ الرِّيحَ فَتُثِيرُ سَحَابًا فَيَبْسُطُهُ فِي السَّمَاءِ كَيْفَ يَشَاءُ)
الروم (٤٨)

(b) Cumulus type :

Seest thou not that Allah drives along some clouds then He joins them together then He makes them into heaps of cumulus.

- Al - Noor (43)-

ب- (أَلَمْ تَرَ أَنَّ اللَّهَ يَنْزِجُ سَحَابًا ثُمَّ يُؤَلِّفُ بَيْنَهُمْ ثُمَّ يُجْعَلُهُمْ رُكَّامًا)

النور (٤٣)

(C) Nimbus clouds:

See you the water which you drink ? Do you bring it down (as rain) from the nimbus clouds or do We ?

- Al - Waquiaa (68 - 69)-

(أَفَرَأَيْتُمُ الْمَاءَ الَّذِي تَشْرَبُونَ ﴿٦٨﴾ أَأَنْتُمْ أَنْزَلْتُمُوهُ مِنَ الْمُزْنِ أَمْ نَحْنُ الْمُنزِلُونَ ﴿٦٩﴾
الواقعة (٦٨ - ٦٩)

The process involving the circulation of the cumulo-nimbus clouds has already been described in Book 1, P.19.

Hail precipitates from cumulo-nimbus clouds only. It differs from snow in many aspects, notably in the process of formation. Allah says what means :

(a) Seest thou not that Allah drives along some clouds, then joins them together, then makes them into heaps of cumulus, then wilt thou see rain issuing from their inside; and sends down from the sky mountain masses of cumulus wherein is hail....

- Al - Nour (43)-

(أَلَمْ تَرَ أَنَّ اللَّهَ يَنْزِلُ سَحَابًا ثُمَّ يُؤَلِّفُ بَيْنَهُمْ سُهُودًا يَجْعَلُ مِنْهَا جُودًا كَمَا أَفْرَى الْوَدَّاقَ يُخْرِجُ مِنْ خَلَلِهِ وَيَنْزِلُ مِنَ السَّمَاءِ مِنْ جِبَالٍ فِيهَا مِنْ بَرَدٍ ﴿٤٣﴾
النور (٤٣)

15. THE EARTH'S TOTAL WATER: seas and water

The total amount of water (in the form of Vapour, liquid water or ice) which our earth gathered in the very beginning of its formation was relatively large as compared with the other planets in the Solar System. At present almost four fifths of the earth's surface is covered with water. This large amount of water is not accidental or in vain, but according to precise measure in order that the earth holds it and thus affords an environment suitable for life to nourish and flourish on it. This large amount of water, however :

(a) Prevents the occurrence of large differences in air temperature between winter and summer. (b) Provides the atmosphere with water vapour sufficient for the fresh water cycle. Allah says what mean :

(a) And We sent down water from heavens according to a precise measure and thereby accused the earth to hold it...

- Al - Muminoon (18)-

٢ - (وَأَنْزَلْنَا مِنَ السَّمَاءِ مَاءً بِقَدَرٍ فَأَسْكَنَتْهُ فِي الْأَرْضِ)
المؤمنون (١٨)

(b) He (Allah) draws therefrom (from the earth) its (fresh) water and its pasture. ✓

- Al - Naziaat (31)-

٣ - (أَخْرَجَ مِنْهَا مَاءَهَا وَمَرْعَاهَا)
النازعات (٣١)

(c) And He (Allah) is the One Who has let free the two seas : One is agreeable and sweet and the other is salty and bitter. He made a barrier between them, a partition that it is forbidden to pass.

- Al - Furquan (53)-

ح - (وَهُوَ الَّذِي مَرَجَ الْبَحْرَيْنِ هَذَا عَذْبٌ فُرَاتٌ وَهَذَا مِلْحٌ أُجَاجٌ وَجَعَلَ بَيْنَهُمَا بَرْزَخًا وَجِجْرًا مَجْجُورًا)
الفرقان (٥٣)

The above verse reveals an outstanding natural phenomenon observed when great rivers flow out into the sea or the ocean. Immediate mixing of fresh water with salt water does not take place! In spite of the fact that the two bodies of water, sweet and salt, are free to intermingle, yet they remain distinct for a long distance as though there exists impassable barrier !

The following two verses almost give the same meaning, but add some favours granted by Allah to man :

(d) He (Allah) has let free the two bodies of water meeting together. Between them is a barrier which they do not transgress. Then which of the favours of your Master will you deny? Out of them come pearls and carol. Then which of the favours of your Master will you deny?

Al- Rahman (19-23)-

﴿ مَرَجَ الْبَحْرَيْنِ يَلْتَقِيَانِ ﴿١٩﴾ بَيْنَهُمَا بَرْزَخٌ لَا يَبْغِيَانِ ﴿٢٠﴾ فَبِأَيِّ آيَاءِ رَبِّكُمَا تُكذَّبَانِ ﴿٢١﴾ يَخْرُجُ مِنْهُمَا اللُّؤْلُؤُ وَالْمَرْجَانُ ﴿٢٢﴾ فَبِأَيِّ آيَاءِ رَبِّكُمَا تُكذَّبَانِ ﴿٢٣﴾ ﴾
 الرحمن (١٩ - ٢٣)

(e) The two seas are not alike. The water of one is agreeable, sweet, pleasant to drink. The other salty and bitter. You eat easy meat from both and extract ornaments which you wear

Fatir (12)-

﴿ وَمَا يَسْتَوِي الْبَحْرَانِ هَذَا عَذْبٌ فُرَاتٌ سَائِغٌ شْرَابُهُ وَهَذَا مِلْحٌ أُجَاجٌ وَمِن كُلِّ تَاكُؤُنٍ مِّمَّا طَرِيبًا وَتَسْتَخْرِجُونَ حِلْيَةً يَلْبَسُونَهَا ﴾ فاطر (١٢)

In conclusion, Most Gacious is Allah, Who reveals Himself in the Holy Qurân and in the universe. He says what means :

(f) Or He (Allah) Who has made the earth firm to live in and made rivers therein and set thereon mountains and made a separating barrier between the two bodies of water ? Can there exist another god besides Allah ? Nay, but most of them (the infidels do not know.

- Al - Naml (61)-

﴿ أَمْ نَجْعَلُ الْأَرْضَ قَرَارًا وَجَعَلْ خِلْفَهَا أَنْهْرًا وَجَعَلْ لَهَا رِوْسِي وَجَعَلْ بَيْنَ الْبَحْرَيْنِ حَاجِزًا ؕ أَلَمْ نَعْلَمْ بِاللَّهِ بَلْ أَكْثَرُهُمْ لَا يَعْلَمُونَ ﴾
 النمل (٦١)

16. STARS

If one turns his attention to the sky and its splendours, notably by night, he is bound to gain a unique spiritual lesson, the author of which is Allah. In fact, one's outstanding reaction to the staggering beauty of cloudless, dark and unpolluted sky is one of awe !!

Amongst the countless billions of stars, some of which being remote galaxis or quasi-stars in the universe, we see only about six thousand. Early astronomers (in ancient civilizations like those of Egypt) were familiar with the constellations which the sun apparently passed by each year (the zodiae). The Arab astronomers gave names to a large number of stars.

Some stars (as Polaris, Sirius and Procyon) were used by the Arabs as guides in their long distance travels. Sirius was guide from Macca to Yemen. In this respect the Holy Qurân says what means :

(a) And indeed He (Allah) is the Master of Sirius.

- Al - Najm (49)-

(وَأَنَّهُ هُوَ رَبُّ الشَّرَعِ) - ٢

النجم (٤٩)

(b) And it is He (Allah) Who made the stars (as beacons) for you that you may guide yourselves with their help through the dark spaces of land and sea. We detail our signs for people who know.

- Al - Anaam (97)-

ب- (وَهُوَ الَّذِي جَعَلَ لَكُمُ النُّجُومَ لِتَهْتَدُوا بِهَا فِي ظُلُمَاتِ الْبَرِّ وَالْبَحْرِ
قَدْ فَصَّلْنَا الْآيَاتِ لِقَوْمٍ يَعْلَمُونَ)

الانعام (٩٧)

(c) And marks (sign posts), and by the stars they (men) guide themselves.

- Al - Nahl (16)-

(النحل (١٦)) (وَعَلَّمَتِ وَيَا لَتَجْمُهُمْ يَهْتَدُونَ) - ح

Quasi - stars are remote galaxies situated beyond the scope of vision. The so-called radio-telescopes are used to detect them. Their distances afar exceed ten billion light years. It is really miraculous that the Holy Qurân refers to the sites of the stars by saying what means :

(d) And indeed I could swear by the sites of the star. And it is a great oath if you are aware of them.

- Al - Waquiaa (75 - 76)-

(فَلَا أُقْسِمُ بِمَوَاقِعِ النُّجُومِ ﴿٧٥﴾ وَإِنَّهُ لَقَسَمٌ لَوْ تَعْلَمُونَ عَظِيمٌ)
الواقعة (٧٥ - ٧٦)

Following to the above two verses, the Holy Qurâh continues to say what means :

- That is indeed a Qurân most honourable.
- In a book well guarded.
- None shall touch it but those who are clean.
- A revelation from the Master of the worlds.
- Is it such a message that you would hold in light esteem ?
- And have you made it livelihood what you should declare it false ?

- Al - Waquiaa (77 - 82)-

(إِنَّهُ لَقَرَّأَنُ كَرِيمٌ ﴿٧٧﴾ فِي كِتَابٍ مَّكُونٍ ﴿٧٨﴾ لَا يَمَسُّهُ إِلَّا الْمُطَهَّرُونَ ﴿٧٩﴾
 نَزِيلٌ مِّن رَّبِّ الْعَالَمِينَ ﴿٨٠﴾ أَفَبِهَذَا الْحَدِيثِ أَنْتُمْ مُدْهِنُونَ ﴿٨١﴾ وَتَجْعَلُونَ
 رِزْقَكُمْ أَنْتُمْ تُكذِّبُونَ)

الواقعة (٧٧ - ٨٢)

The Holy Qurân also says what means :

(e) Say : Behold all that is in the heavens and the earth. But neither signs nor warners profit those who believe not.

- Yunus (101)-

هـ (قُلْ أَنْظِرُوا مَا ذَا فِي السَّمَوَاتِ وَالْأَرْضِ وَمَا تُغْنِي

يونس (١٠١)

الآيَاتُ وَالنَّذْرُ عَنْ قَوْمٍ لَا يُؤْمِنُونَ)

Finally, it is worth mentioning that Allah swears by : The heavens, the sun, the moon, the earth, the sky or the earth's atmosphere, the sea, the day, the night, meteors, meteorites, comets ... and the stars, and their remote sites. All these objects, in fact, constitute the universe as we know it :

By the heaven and the night glower. And what do you know about the night. It is the brilliant (piercing) star.

- Al - Tarique (1 - 3)-

وَالسَّمَاءِ وَالطَّارِقِ ﴿١﴾ وَمَا أَدْرَاكَ مَا الطَّارِقُ ﴿٢﴾ النُّجُومِ الثَّاقِبِ)

الطارق (١ - ٣)

17. THE KEY TO THE PAST HISTORY OF THE EARTH

Near the end of the eighteenth century, James Hutton (the famous geologist) declared that the earth's history is written inside the layers of its crust.

It is the duty of the geologist to travel through the earth here and there in order to collect the so-called fossils - remainders of the creatures which lived on earth in the past - and then try to arrange them in the order which enables him to follow (or read) their history ! Amazingly enough, the Holy Qurân says what means :

Say : Travel through the earth and see how creation was originated (by Allah)...

- Al- Ankabout (20)

(قُلْ سِيرُوا فِي الْأَرْضِ فَانظُرُوا كَيْفَ بَدَأَ الْخَلْقَ)

العنكبوت (٢٠)

18. HEAVENS ON THE LAST DAY

(a) FORWARD

In this series of books, it has already been dealt with the final fate of the sun.

At present, the following, are fair estimates concerning the cosmos :

1. Mass of total matter = 10^{56} gram
2. Density of matter (after expansion) = 10^{-29} gram / cm^3 .

On the Last Day, the density of the matter of the universe will approach again 10^{92} gram / cm^3 as it was just before the Big - Bang ! However, this means that the cosmos will be compacted again within a volume of 10^{-36} cm^3 , which also means ceasing of the universe :

Do not the unbelievers see that the heavens and the earth were joined together and We clove them asunder !?

- Al - Anbiyaa (30)-

(**أَوَلَمْ يَرِ الَّذِينَ كَفَرُوا أَنَّ السَّمَوَاتِ وَالْأَرْضَ كَانَتْ رَتْقًا فَفَتَقْنَاهُمَا**)
 الانبياء (٣٠)

On that Day, the seven heavens will be folded up and the physical world will be entirely destroyed:

The Day that We roll up the heavens like a scroll rolled up for books. Just as We produced the first creation so shall We return it back (to its original state) : A promise We have undertaken. Truly shall We fulfil .

- Al - Anbiyaa (104)-

(**يَوْمَ نَطْوِي السَّمَاءَ كَطَيِّ السِّجِلِّ**)
لِلْكُتُبِ كَمَا بَدَأْنَا أَوَّلَ خَلْقٍ نُعِيدُهُ وَعَدَّ عَلَيْنَا إِنَّا كَافِعِينَ
 الانبياء (١٠٤)

(b) THE COSMIC REVOLUTION OF THE HEREAFTER

Probalely the Holy Qurân is the only source of information concerning the status in the Hereafter, when natural processes as we know them cease to function. The cosmic revolution of the Hereafter will be so great and beyond imagination. The physical world will vanish revealing the true and real spiritruâl facts. Allah says what means :

(a) It is Allah Who sustains the heavens and the earth lest they annihilate, and if they should annihilate there is none - not one - who can sustain them thereafter

- Fatir (41)-

(إِنَّ اللَّهَ يُسِكُّ السَّمَوَاتِ وَالْأَرْضَ أَنْ تَزُولَا وَلَئِن زَالَتَا إِنْ أَمْسَكَهُمَا مِنْ أَحَدٍ مِنْ بَعْدِهِ)

فاطر (٤١)

(b) I do call to witness the Resurrection Day.

- Al - Quiyama (1)-

(لَا أُقْسِمُ بِيَوْمِ الْقِيَامَةِ)

القيامة (١)

(c) One day the earth will be changed to a different earth and so will be the heavens, and men will be marshalled forth before Allah, the One, the Irresistable.

- Ibrahim (48)-

(يَوْمَ يُبَدَّلُ الْأَرْضُ غَيْرَ الْأَرْضِ وَالسَّمَوَاتُ وَبَرَزُوا لِلَّهِ الْوَاحِدِ الْقَهَّارِ)

ابراهيم (٤٨)

(d) it is He Who begins the (process of) creation and then repeats it

- Yunus (4)-

(إِنَّهُ يُبَدِّئُ وَيُعِيدُهُ)

يونس (٤)

It is a great pity that the majority of people are doubtful about, or even reject believing in, the Hour of Judgement. The Holy Qurân tells us briefly what means :

(e) Those who reject faith will not cease (stop) to be in doubt concerning the Qurân until the Hour comes suddenly upon them, or there comes to them the penalty of a Day of Disaster. On that day the Dominion will be that of Allah; He will judge between them : So those who believe and work righthous deeds will be in Gardens of Delight. And for those who reject faith and deny Our signs, there will be a humiliating punishment.

- Al - Haj (55 - 57)-

(وَلَا يَزَالُ الَّذِينَ كَفَرُوا فِي مِرْيَةٍ مِّنْهُ حَتَّىٰ تَأْتِيَهُمُ السَّاعَةُ بَغْتَةً أَوْ يَأْتِيَهُمْ عَذَابٌ يَوْمٍ عَقِيمٍ ﴿٥٥﴾ الْمَلِكُ يَوْمَئِذٍ لِّهِ يَحْكُمُ بَيْنَهُمْ فَالَّذِينَ ءَامَنُوا وَعَمِلُوا الصَّالِحَاتِ فِي جَنَّاتِ النَّعِيمِ ﴿٥٦﴾ وَالَّذِينَ كَفَرُوا وَكَذَّبُوا بِءَايَاتِنَا فَأُولَٰئِكَ لَهُمْ عَذَابٌ مُّهِينٌ)

الحج (٥٥ - ٥٧)

Finally, the Holy Qurân, however, reminds us regarding an outstanding event which will take place when the Hour becomes fairly nigh; the Holy Qurân says what means :

When the Hour becomes nigh the moon will cleft.

- Al - Quamar (١)-

(أَقْرَبَتْ السَّاعَةُ وَأَنشَقَّ الْقَمَرُ)

القمر (١)

19. CLEAVAGE OF THE MOON

The moon is the nearest heavenly body to the earth. Both bodies influence each other mutually, notably by universal gravitation.

Astronomically the moon and the earth form together what is called (a closed system) regarded as being isolated from other systems. In this respect the moon regulates the rate of the earth's rotation round its axis. Thus, when the rate of the earth's rotation increases, due to some reason or another, the moon approaches and vice versa. Changes in the rate of rotation of the earth actually mean corresponding changes in day - length.

At present, the most accurate method, adopted in measuring day-length is to time carefully when stars pass overhead. Astronomers, equipped with atomic clocks, which afford very accurate time - keeping, have found that they reach the overhead point slightly later each day, and that this show down is actually gradual during the course of a century : The length of the day thus increases by .001 of a second !!

However, it has been made clear that when the occasion comes in, which the rate of rotation of the earth increases and the day - length decreases beyond a certain limit, the moon will approach towards the earth to the extent that its face nearest to us will cleave under the effect of the earth's gravitational pull ! Here again the Holy Qurân says miraculously what means :

Hour becomes When the nigh the moon will cleave.

- Al - Qauamar (1)-

(أَقْرَبُ السَّاعَةِ وَأَشَقُّ الْقَمَرِ)

القمر (1)

FURTHER QURANIC ISSUES

I. THE CONCEPT OF WORK

Islam is both, a code of worship and way of life practicable for all times and applicable to all human issues. As has already been made clear in the present series of books (Islam and Science), evils of poverty, disease, ignornace, criminality and the like are rampant in the Muslim society, and Muslims in general should not attribute their miseries to the will of Allah. In this respect the Holy Qurân says for example what means :

And whatever evil happened to you is because of (the things) you have wrought

- Al - Shura (30)-

(وَمَا أَصَابَكُمْ مِنْ مُصِيبَةٍ فَمَا كَسَبَتْ أَيْدِيكُمْ)
الشورى (٣٠)

These evils are mostly related to work and depend to a great extend on the effort made by people in order that they may improve their status and environment in accordance with their needs.

It is a fact, however, that several wrong attitudes, capable for the degeneration of the Muslim World, have crept into the Muslim society. Now, in order to change their attitude, it is essential for them to follow the Quranic guidance.

One of the characteristic marks of Islam is the fact that it essentially calls for work. The following examples are verses concerning this matter as interpreted from the Holy Qurân :

a - But when the prayer is finished, scatter in the land and seek the bounty of Allah

- Al - Jumua (10)-

﴿ فَإِذَا قُضِيَتِ الصَّلَاةُ فَانْتَشِرُوا فِي الْأَرْضِ وَابْتَغُوا مِنْ فَضْلِ اللَّهِ وَاذْكُرُوا اللَّهَ (الجمعة (١٠)

The harmonious development of human personality depends mainly upon acquiring a balance between the needs of the body (afforded by work) and those of the soul (realized by worship). In other words, work and worship are both requirements for happiness in the earthly life and in the hereafter :

b - And there in the bestowals Allah has given you (by work), seek the hereafter, but forget not your portion in (this) world

- Al - Ouassas (77)

﴿ وَابْتَغِ فِيمَا آتَاكَ اللَّهُ الدَّارَ الْآخِرَةَ وَلَا تَنْسَ نَصِيبَكَ مِنَ الدُّنْيَا (القصص (٧٧)

There lies great honour and esteem in work according to various verses :

c- And say : Work and indeed Allah will see your work, as well as His messenger and the believers

- Al - Tawba (105)-

﴿ وَقُلْ أَعْمَلُوا فَسِرِّي اللَّهُ عَمَلَكُمْ وَرَسُولُهُ وَالْمُؤْمِنُونَ (التوبة (١٠٥)

Besides the material gain in the earthy life, work is observed by Allah and has its reward :-

a. Whoever does a righteous deed, be him male or female and he is a believer, verily to him will We give a new life, a life that is good and pure and we Will bestow on such their reward according to the best of their deeds. - Al - Nahl (97)-

(مَنْ عَمِلَ صَالِحًا مِّنْ ذَكَرٍ أَوْ أُنْثَىٰ وَهُوَ مُؤْمِنٌ فَلَنُحْيِيَنَّهٗ حَيٰوةً طَيِّبَةً

وَلَنَجْزِيَنَّهُمْ أَجْرَهُم بِأَحْسَنِ مَا كَانُوا يَعْمَلُونَ) النحل (٩٧)

This also means that : (1) No human action passes unnoticed. (2) True and faithful work has its reward.

b. ... The reward of Allah (in the hereafter) is better for those who believe and work righteousness, but this none shall attain save those who steadfastly persevere.

- Al - Quassas (80)-

(ثَوَابُ اللَّهِ خَيْرٌ لِّمَنْ ءَامَنَ وَعَمِلَ صَالِحًا وَلَا يُلْقَاهَا إِلَّا الصَّابِرُونَ) القصص (٨٠)

Needless to say that the Holy Qurân declares that the righteous deeds will be rewarded not only in the hereafter, but also in this world as well :

We did write in Al-Zaboor after Al-Zikr that the righteous shall inheret the earth.

- Al - Anbiyaa (105)-

(وَلَقَدْ كَتَبْنَا فِي الزَّبُورِ مِنْ بَعْدِ الذِّكْرِ أَنَّ الْأَرْضَ يَرِثُهَا عِبَادِيَ الصَّالِحُونَ) الانبياء (١٠٥)

All this shows clearly that Islam emphasises the importance of exerting effort to expect any gain. On these grounds, Islam condemns usury :

O you who have believed do not live on usury doubled and redoubled, but act piously towards Allah and it may be that you shall prosper.

- Al - Imran (130) -

(يَا أَيُّهَا الَّذِينَ آمَنُوا لَا تَأْكُلُوا الرِّبَا أَضْعَافًا مُضَاعَفَةً وَاتَّقُوا اللَّهَ لَعَلَّكُمْ

تُفْلِحُونَ)
آل عمران (۱۳۰)

II. THE RELATION BETWEEN RELIGION AND SCIENCE

The relation between religion and science differed widely from place to place and with time. Practically little or no writings concerning this relation was achieved before the Age of Science. However, history tells us that, during the Middle Ages scientists faced great difficulties with the religious authorities in Europe. The accusation and trial of Galileo (1615) is well-known in this respect.

It is not strange therefore that still the reaction of scientists, on taking vengeance, is that any one who mentions God in scientific circles in the West is belittled and is bound to stand out.

As shown and made clear in the present series of books (Islam and Science), this attitude is totally different in the case of Islam. The Holy Qurân, not only invites people to cultivate science, but also it includes numerous verses which refer to several natural phenomena, establish the principles of basic science and favour increase of knowledge. For example one reads in the Holy Qurân what means :

a. Say : Behold all that is in the heavens and the earth

Yunus (101)-

﴿ قُلْ أَنْظِرُوا مَاذَا فِي السَّمَوَاتِ وَالْأَرْضِ ﴾

يونس (١٠١)

b. Behold ! In the creation of the heavens and the earth and the alteration of night and day there are indeed signs for men of understanding.

- Al - Imran (190)-

ء (اِنَّ فِيْ خَلْقِ السَّمٰوٰتِ وَالْاَرْضِ وَاٰخِثٰفِ اللَّيْلِ وَالنَّهَارِ لَآٰيٰتٍ لِّاُوْلِي الْاَلْبَابِ)

ال عمران (١٩٠)

c. ... say are those equal, those who know and those who know not ? ...

- Al - Zumar (9)-

ح - (قُلْ هَلْ يَسْتَوِي الَّذِيْنَ يَعْلَمُوْنَ وَالَّذِيْنَ لَا يَعْلَمُوْنَ)

الزمر (٩)

d. ... Allah will raise up to (suitable) ranks those of you who believe and who have been granted Knowledge

- Al - Mujadala (11)-

ء - (يَرْفَعُ اللّٰهُ الَّذِيْنَ اٰمَنُوْا مِنْكُمْ وَالَّذِيْنَ اٰتَوْا الْعِلْمَ دَرَجٰتٍ)

المجادلة (١١)

e. But it (the Qurân) is clear signs in the hearts of those who have been granted Knowledge

- Al - Anquaboot (49)-

ه - (بَلْ هُوَ آٰيٰتٍ بَيِّنٰتٍ فِىْ صُدُوْرِ الَّذِيْنَ اٰتَوْا الْعِلْمَ)

العنكبوت (٤٩)

f. ... say : Bring forth your proof, provided you are right.

- Al - Baquara (111)-

و - (قُلْ هَاتُوْا بُرْهٰنَكُمْ اِنْ كُنْتُمْ صٰدِقِيْنَ)

البقرة (١١١)

g. ... and say : O my Master grant me more Knowledge.

Taha (114)-

طه (١١٤) (وَقُلِّدْ زِدْنِيْ عِلْمًا)

III. HUMAN RIGHTS IN ISLAM

(a) EQUALITY

In Islam every individual has the same rights and is compelled to fulfil equal duties, without distinction of race, colour, relations, or wealth. The best of human beings in the sight of Allah are those who show piety and are most useful to the human family. The law of Allah is prescribed by the Holy Qurân which says, for example, what means :

a- O mankind ! Lo ! We have created you male and female, and have made you into nations and tribes that you may know one another. Lo ! the noblest of you in the sight of Allah is the most righteous of you. Indeed Allah is All- Knowing All- Cognizant.

- Al - Hujurat (13)-

۲- (يَا أَيُّهَا النَّاسُ إِنَّا خَلَقْنَاكُمْ مِنْ ذَكَرٍ وَأُنْثَىٰ وَجَعَلْنَاكُمْ شُعُوبًا وَقَبَائِلَ لِتَعَارَفُوا إِنَّ أَكْرَمَكُمْ عِنْدَ اللَّهِ أَنْتُمْ أَنْتُمْ إِنْ أَنْتُمْ إِلَّا اللَّهُ عَلَيْهِ خَيْرٌ)
الحجرات (۱۳)

b- Allah forbid you not those who fought you not on account of religion and drove you not from your houses, that you should show them kindness and deal justly with them. Lo ! Allah likes the just dealers.

- Al - Mumtahena (8)-

۳- (لَا يَنْهَىٰ اللَّهُ عَنِ الَّذِينَ لَمْ يُقَاتِلُوكُمْ فِي الدِّينِ وَلَمْ يُخْرِجُواكُمْ مِنْ دِيَارِكُمْ أَنْ تَبَرُّوهُمْ وَتُقْسِطُوا إِلَيْهِمْ إِنَّ اللَّهَ يُحِبُّ الْمُقْسِطِينَ)

المتحنة (۸)

(b) JUSTICE

a- And of their wealth the beggar and the outcast have due share.

- Al - Zariyat (19)-

الذاريات (١٩) - P (وَفِي أَمْوَالِهِمْ حَقٌّ لِّلسَّائِلِ وَالْمَحْرُومِ)

This verse declares the right of every person to lead honourable life by getting rid of need. Special funds are taken from those who are financially able to fulfill this right of the poor.

b- O you who believe ! Be steadfast witnesses for Allah in equity, and let not hatred of any people seduce you that you deal not justly. Deal justly, that is nearer to piety. And fear Allah. Indeed Allah is All- Aware of what you do.

- Al - Maida (8)-

يَا أَيُّهَا الَّذِينَ ءَامَنُوا كُونُوا قَوَّامِينَ لِلَّهِ شُهَدَاءَ بِالْقِسْطِ وَلَا يَجْرِمَنَّكُمْ شَنَاٰنُ قَوْمٍ عَلَىٰ ءَلَّا تَعْدِلُوا ءَاعْدِلُوا هُوَ أَقْرَبُ لِلتَّقْوَىٰ وَاتَّقُوا اللَّهَ إِنَّ اللَّهَ شَدِيدُ الْعِقَابِ (٨)

المائدة (٨)

c- And let not the hatred of a folk, if compelled you to keep off Al-Masjid Al-Haram, seduce you to transgression, and help you one another unto righteousness and piety, and help not one another unto sin and transgression, but keep your duty to Allah. Indeed Allah is severe in punishment.

- Al - Maida (2)-

- ح -

(وَلَا يَجْرِمَنَّكُمْ شَنَاٰنُ قَوْمٍ اَنْ صَدُّوْكُمْ عَنِ
 الْمَسْجِدِ الْحَرَامِ اَنْ تَعْتَدُوْا وَتَعَاوَنُوْا عَلٰى الْبِرِّ وَالْتَقُوْا وَلَا تَعَاوَنُوْا عَلٰى
 الْاِثْمِ وَالْعُدُوْنِ وَاَتَقُوْا اللّٰهَ اِنَّ اللّٰهَ شَدِيْدُ الْعِقَابِ)

(المائدة (٢))

(c) LIBERTY IN FAVOUR OF MAN

The Holy Qurân says what means :

Let there arise out of you a nation inviting to all that is good, enjoining what is right and forbidding what is wrong, and those are (themselves) who have yielded to His guidance.

- Al - Imran (104)-

(وَلَتَكُنْ مِنْكُمْ اُمَّةٌ يَدْعُوْنَ اِلَى الْخَيْرِ وَاْمُرُوْنَ بِالْمَعْرُوْفِ وَيَنْهَوْنَ
 عَنِ الْمُنْكَرِ وَاُولٰٓئِكَ هُمُ الْمُضْلِحُوْنَ)

ال عمران (١٠٤)

Evidently, Islam gave serious concern to the basic human rights namely : Equality, justice and Liberty; but, in fact, Islam goes further than the rights quoted in the Drafting Body of the Declaration of 1948 !!

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CONTENTS

	Page
Forward	3
Allah Reveales Himself in the Qurân and the Universe	
I - Introduction	5
II - Detailed Scientific Comments Concerning Some Selected verses	9
1. Introduction .	
2. Expansion of the Universe (Heavens)	10
3. The Fresh - Water Cycle on Earth	13
4. Surat (Chapter) Al-Falaq (The Splitting Organism)	15
5. The Solar System	17
6. The Sun	19
7. The Moon	23
8. The Planets	25
9. The Asteroids and Comets	26
10. We are not Alone in the Universe	27
11. Time	31
12. The Arctic Circle	33
13. Mountains	34
14. Clouds and Precipitation	36
15. The Earth's Total Water : Seas and Oceans	38
16. Stars	41
17. The Key to the Past History of the Earth	44
18. Heavens on the Last Day	44
19. Cleavage of the Moon	48
FURTHER QURANIC ISSUES	
I - The Concept of Work	49
II - The Relation between Religion and Science	53
III - Human Rights in Islam	55
(a) Equality	55
(b) Justice	56
(c) Liberty in Favour of Man	57

رقم الإيداع: ٩٥/٥٢١٩