

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

EXPLANATORY NOTES

(Based On Latest Scientific Facts)

CHAPTER - 1

1. (1:1) Allah: Allah is the proper name applied to the Divine Being Who exists necessarily by Himself, comprising all the attributes of perfection. Allah is an underived word, it neither has a feminine nor a plural, it has never been applied to any being except to the true God, nor did the Arabs give this name to any of their idols. As a proper name it cannot be translated into any other language nor is an equivalent of it met with in any other language. The word god is the translation of the word 'Ilaha', which is not a personal name but the name of a status or designation. In view of this, the word Allah has been retained as such, where as the word Ilaha has been translated as god.

2. (1 : 1) Rabb: According to Raghīb. the word Rabb signifies, fostering of a thing in such a manner as to make it attain one condition after another until it reaches its goal of completion. Hence it has been translated as Fosterer at most of the places and as Lord at some places where the word Fosterer does not appear to be appropriate.

3. (1 : 1) Aalameen: The word Aalam is a thing through which knowledge of something else is obtained. The whole universe is known as an Aalam because knowledge of Allah is obtained through it. World appears to be the nearest English equivalent of this word. But there are many worlds/physical, mental, spiritual, past, present, future, human, animal etc. Besides, the world today is not what it was yesterday or what it would be tomorrow. According to scientists, the universe is expanding, therefore it not only changes with time but also in space, occupying different volumes at different times. The kingdom of Allah would therefore best be represented by the plural 'Aalameen' which has been translated as worlds. Quantum physicists too propose the existence of many universes.

4. (1 : 4) Ibadat: A derivative (of the word Abd, means slavery or service and sometimes worship. It cannot always be translated as worship, because worship is only a part of the total service which consists of obeying all the orders of Allah and His messenger Muhammed (peace be on him) in the form of doing righteous works (amal-i-sateh) and guarding against evil (taqwa). Sometimes one is not sure as to which of the two senses it has been used in, therefore both the translations have been used, keeping one in brackets: service (worship).

CHAPTER - 2

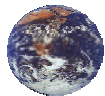
1. (2 : 1) **Alif. Laam. Miim:** Certain chapters have certain initials prefixed to them. Many guesses have been made as to their meaning but opinions differ.

2. (2 : 3) **Salat:** This word has been retained in brackets and its translation "worship" prefixed to it, to convey the sense of the formal worship which consists of standing, bowing down, sitting, prostrating etc. It has been translated by some as prayer which appears to be a more appropriate translation of the word 'Doa' used for seeking Allah's help.



3. (2 : 29) Structure of the Universe

Solar System: The earth on which we live, is one of the millions of celestial bodies which float in space. It is a member of the solar system which consists of the sun, nine planets and their satellites. All planets revolve around the sun in nearly circular orbits and all these orbits lie in nearly the same plane. The sun rotates in the direction of the planets. All planets rotate about their respective axes, the period of rotation of each being different. The speed at which each planet revolves around the sun is also different. The nine planets are at various distances from the sun. The earth which is third in position from the sun is 93 million miles from it and the furthest planet Pluto is about 3600 million miles away from the sun. The sun, planets and their satellites freely suspended, float in space. A rotational motion keeps the individual members of the system in equilibrium against the gravitational force of attraction of the sun. Gravitation counteracts the centrifugal force of orbital motion. These two forces are in equilibrium.



The Earth: The earth, a rocky globe 8000 miles in diameter completes one rotation about its axis in 23 hours and 56 minutes. Due to this rotation, when one half faces the sun, the opposite half is in darkness, giving rise to the alternation of day and night. The earth takes 365 days 6 hours 46 minutes and 48 seconds i.e. one year for one complete revolution around the sun. The axis of the earth is inclined 23 1/2 degrees towards the plane of its orbit. This inclination of the axis is the well-known cause of changes in season.

The Moon: A satellite is comparatively a small celestial body circulating around a planet. Moon is the satellite of the earth. It revolves around the earth and also rotates about its axis in 28 days with respect to the earth and 29 1/2 days with respect to the sun. The moon is 2000 miles in diameter and is about 2,50,000 miles away from the earth. Moonlight is reflected sunlight.

The sun and the moon, in addition to serving many other purposes, have served as a clock and a calendar. In fact all clocks and calendars have been geared to these members of the solar system.

The Sun and the Stars: The sun is a typical selfluminous star, composed chiefly of hydrogen and helium. It is about 8,65,000 miles in diameter and 3,30,000 times heavier than the earth. Its central temperature is 20 to 30 million degrees centigrade. The sun's fuel is hydrogen which is gradually converted to helium. The heat and light of the sun are made to maintain life on the earth. The sun is not unique but one of the billions and billions of similar stars. There are something about 200 million, million, million stars in that part of the universe which is visible through our most powerful telescopes. Each of these stars, like our own sun, is a source of energy radiating heat and light. They vary in size from bodies smaller than the earth to bodies larger than the whole solar system i.e. 3600 million miles.

Stars have been of great use to navigators and traveler's in locating their position on earth. At night navigators in the northern hemisphere use the north star, while ships in the southern hemisphere use other stars for determining their latitude.



The Galaxies: The stars are not uniformly distributed throughout the space of the universe, but are grouped together in clusters which are called galaxies. Galaxies populate the observable portion of the universe with more or less homogeneous and isotropic distribution.

Galaxies are separate systems of stars each containing on an average 100,000,000,000 stars and ranging in diameter from 1500 to 300,000 light years. (One light year is the distance travelled by light in one year at the speed of about 1,86,000 miles per second.) Galaxies exist in various shapes and sizes. The solar system is situated in a galaxy known as the Milky Way. This galaxy of ours has the form of a great disc or wheel with a marked central thickening at the hub. It contains about 100 billion stars, of which our own sun is but one small insignificant member. The nearest star to our sun is about 25 million million miles away and the nearest galaxy to our galaxy is about 400,000 times further away than this. The thickness of bur galaxy is from 5000 to 15000 light years from edge to edge. In our galaxy, the sun with the solar system is situated about 3/5th of the way out from the center. almost on the central plane. The whole system is rotating in such a manner that the sun with the planets completes one revolution around the common center of

gravity of the galaxy in about 200 million years. The sun with its planets travels nearly at 200 miles per second to complete its cycle.

Clusters of Galaxies : The destruction of galaxies in space shows a definite tendency of galaxies to cluster. Our galaxy is at one edge of a small cluster known as the 'Local Group' which contains about 15 members. Our galaxy ranks amongst the largest, biggest and the most massive known.

The Expanding Universe : The entire universe is now estimated to contain about 100,000,000,000 galaxies. Between its millions and millions of stars each galaxy contains vast stretches of wide space. Matter exists in this near vacuum but is very thinly distributed. From the evidence available it is believed that the universe is not of a fixed size but is constantly expanding outwards into space in all directions. This may be explained by the example of a balloon, the surface of which is marked with spots. Imagine the balloon to be the universe and the spots to be clusters of galaxies. When the balloon is inflated it will become larger and larger as a result of which the distance between the spots i.e. the clusters of galaxies, will go on increasing. In a like manner the distant galaxies are receding from us at enormous speeds. It must be made clear, that our galaxy, like most others, belongs to a local cluster of galaxies, the components of which are not receding from each other, it is the distant clusters of galaxies which are receding away from our local cluster. The furthest away a cluster of galaxies is, the greater is its observed speed of recession. In fact recently a very distant galaxy has been observed to be receding from us at nearly half the speed of light i.e. 93,000 miles per second, from the evidence available, it now appears to be extremely likely that even more distant galaxies are receding from us at the speed of light itself and therefore light from them can never reach us. This means that with all our scientific progress we may not be able to detect even objects of the sizes of galaxies, though they exist.

Our Journey in Space : Summarily, we find that the moon revolves round the earth in nearly a month. The earth rotates about its axis in about 24 hours, causing day and night, in such a manner that a man sitting at any point on the equator travels at a speed of 1041.41 miles per hour. The earth further revolves around the sun at an average speed of 66,000 miles per hour along with the moon and takes nearly 365 1/4 days i.e. one year to complete one revolution. The sun in turn rotates about its own axis and with the earth and other planets and their satellites, revolves around the common center of gravity of the galaxy (Milky Way) at a speed of

about 7,20,000 miles per hour. Finally various clusters of galaxies are receding away from each other at tremendous speeds.

This setup of the universe shakes the very power of human imagination. Bodies weighing billions and billions of tonnes, occupying volumes expressed in millions of light years, raveling at speeds approaching that of light, could it be a self-styled universe inanimate bodies managing their own affairs and that too in such a grand and organised manner? This possibility is more unimaginable than the very setup of the universe. The unity in the organisation of the universe, the magnitude and the quality of affairs managed are sufficient to prove the existence of a Creator-Manager God, Who is at the helm of all affairs.

Thus a person relaxing on an easy chair on the surface of the earth, apparently feeling himself to be at rest, is in fact travelling in a spaceship, the earth, unaware of the complicated paths, unaware of the tremendous speeds, even unaware of his very destination.

The seven systems of movements of the celestial bodies encountered in the universe are:

1. The movement of the satellite (moon) around the planet (earth).
2. The rotation of the planets (earth) about their own axes.
3. The revolution of the planets (earth) around a star (sun).
4. The rotation of the star (sun) about its own axis.
5. The revolution of the star (sun with its family of planets and satellites) about the common center of gravity of the galaxy (Milky Way).
6. The mutual movement of the galaxies within a local group of galaxies and

7. The outward movement of groups of galaxies in all directions (The Expanding Universe.)

It is quite possible that the seven skies, layers, Orbits, ways referred to in Ch.2,V.29; Ch.23. V,I7;

Ch-67, V,3; and Ch.78, V.12; may be four different sets of things each containing seven items or they may all refer to only one set of seven items or they may refer to something which is beyond our present understanding. The word 'Sawaun' conveys the sense of equality, equilibrium, balance, etc. Its derivative 'Istawa' would therefore mean receiving or seeking equality, equilibrium, balance, etc. In the verse under discussion the subject is Allah, and Allah does not seek but gives or sets- In view of this background, this part of the verse has been translated as "Then He set the balance....."

4. (2 : 30) Energies: Angels & Jinn: According to the Quran, angels, complying with the orders of Allah, communicate His messages, guard people, record their deeds, punish and help them, cause them to die, are responsible for natural calamities, are incharge of paradise and hell and descend for various other affairs. They thus appear to be involved in doing various works. In scientific terminology, work involves energy.

Allah alone knows their real forms and functions but the above facts tempt us to ponder over few possibilities: Are angels 'beings' put in charge of various energies by Allah?

The angels, according to the statement of prophet Muhammed (PBH) reported by Muslim, have been created from 'Noor' (Tafsir ibni Kaseer, Quran, chapter 18, page 103, under explanatory notes). The word Noor, normally translated as light, could also mean radiant energy. Besides, the Arabic word 'Malak' translated as angel also conveys the sense of strength, power or energy.

The Quran, about the jinn states:

"And He (Allah) created the jinn from the (heat wave) let free from fire (Q. Ch. 55, v. 15.). Something let free from fire, in the terminology of science, could mean infrared rays or heat energy.

Could the angels and the jinn be composed of some forms of radiant energy, whom we cannot perceive through our physical senses but who exist and exert their influence on us without our being conscious of them, just like X-rays, which penetrate the human flesh but do not impart any feeling to the human being concerned?

Does bowing down of angels before Adam, mean that Allah has Himself given human beings control over some of the energies and that the progress in science and technology is not the achievement of man but just a Divine gift?

5. (2 : 39) Ayat: "The word Ayat means an apparent sign or mark, it is also used for the communication from Allah in the form of statements or verses of the Quran and sometimes for miracles performed by messengers of Allah. A sign indicates the presence of something. The sign of a red bulb at the clinic of a doctor indicates the presence of the doctor. Similarly the innumerable signs (Ayats) in the universe, the miracles performed by the messengers of Allah and the statements or verses of the Quran due to their truth, prove the presence of Allah. At many places in the Quran, we are not sure, in which of the three senses, the word Ayat is used.

6. (2:40) Children of Israel: The progeny of prophet Yaqub the grandson of prophet Ibrahim is known as Bani Israel or children of Israel.

7. (2;43) Zakat: This word literally means purification, but as a term in Islamic law, it means: giving off a fixed portion of cash or property by the rich to the poor annually, for purification of wealth. The payment of 2 1/2 percent of cash or kind as zakat, is compulsory provided that the cash or property is of a certain minimum value and it has been in possession for one lunar year. This word has been translated as poor rate, poor due, alms, regular charity, Islamic tax etc., but these words do not convey the exact sense of the term. In view of this the word zakat is bracketed with charity to retain its original meaning and distinguish it from normal charity. Zakat is actually the property of the poor but in the custody of the rich, so it is a sin if the rich do not dispose it off to the people to whom it belongs. Zakat being the right of the poor, one deserving to receive it should not feel insulted to accept it Allah has made zakat obligatory on the rich and has thus indicated that money should flow from the rich to the poor and not vice versa as in usury, which He has prohibited (2: 278-279).

8. (2 : 57) Manna: Found in Sinai region, is a gummy saccharine secretion found on a species of Tamarisk. The amount necessary for one man was 2 1/2 quarts. Nearly 2 litres by volume. Quails are birds called salwa by the Arabs. It is said that they are eaten whole. They were brought from Yemen by a south wind in great numbers to the Israel camp in the desert.

9. (2 : 60) Hijaratun: The word hajrun means stone, to prohibit, to stop, to protect etc, and the word hujratun means, a room. In view of this hijaratun could mean a porous rock which can hold water (aquifer).

10. (2 : 65) Sabbath: During the period of prophet Dawood some Israelites dwelt at Elath on the Red Sea. Israelites were ordered not to fish on Sabbath (Saturday) as a mark of respect, but the fish used to come in great numbers to the shore on the night of Saturday and stay there throughout Sabbath to tempt them. Some inhabitants dug ditches and cut canals from the sea for the fish to enter on Sabbath, then they prevented them from going back to the sea by disconnecting the ditches and canals. Thus they removed the fish on Sunday. They claimed that the fish had gathered on Friday and were caught on Sunday, not Saturday. Therefore as a mark of punishment they were transformed into apes.

11. (2 : 74) Khashiyat: Things fall down due to the gravitational pull of the earth towards its center. In this verse it is stated that some rocks fall down due to Khashiyat Allah, that is, fear of Allah. Is the force of gravity due to universal fear of Allah?

12. (2 : 104) The word 'Ra'ina' translated as "Listen to us", with a twist of the tongue means, "He is foolish", therefore an unambiguous word is suggested in its place.

13. (2 : 142) Qibla: A glance at the world map shows that Kaaba is centrally located with respect to all the continents of the world. Muslims all over the world are required to face the Kaaba while offering salat, so that with Kaaba as the center, parallel circles of praying muslims are formed all over the earth. It may be noted that we do not worship the Kaaba, we worship only Allah. We only face towards the Kaaba probably for uniformity, because in the absence of a common direction during salat, muslims from different parts of the world would have turned in different directions causing confusion especially at occasions like Hajj.

14. (2 : 173) Ghafoor: The words 'Ghafrun and Ghafeer' mean to cover, protect, guard etc. The word 'Ghafara' means to forgive, pardon etc. The root alphabets of the word Ghafoor appear to convey the sense of protection as well as forgiveness, therefore the words 'Ghafoor, Ghaffar', etc. have been translated as 'Protectively Forgiving.'

CHAPTER - 3

1. (3 : 13) Battle of Badr: (Year H.2) A caravan of non-muslims of Mecca, from where muslims had to flee to Madina, was returning from Syria. When the Meccans came to know that this caravan might be pursued by the Muslims from Madina, they inarched with a strong army of 1000 men to save the caravan. Muslims who were only 313 were ordered to meet the army from Mecca at Badr and not the caravan. Muslims fought so bravely that the non-muslims, though thrice their number, were defeated and many of them killed. This raised the prestige of the muslims all over. The special feature of this battle was the less number of muslims, which proves that victory depends on Allah's help and not on numbers.

2. (3 : 121) Battle of Uhad (Year H. 3): The non-muslims of Mecca wanted to retaliate their defeat at Badr. They consequently marched with a stronger army and reached the hilly tract near Madina, known as Uhad. The muslims were victorious in the very first attack. Some 50 soldiers were posted at an elevated place by the Prophet (PBH), as guards, and were instructed not to leave their positions till he ordered them to do so, but when they saw that the muslims were victorious, many of them left their positions and became busy in collecting the booty of war. The retreating enemy, finding an unguarded way, returned and attacked the muslims when they were unaware. Many muslims were slain and even (he prophet (PBH) was injured. Suddenly the muslims reconsolidated their position and the enemy was forced to go away. The lesson this battle taught was that disobeying the instructions of the prophet (PBH) and preferring worldly gains to religious duties could become major causes for the defeat of muslims.

CHAPTER. 5

1. (5 : 3) Prohibited Food and Intoxicants: Food that is prohibited is harmful for the human body.

Pork: Trichinosis is commonly caused by the ingestion of improperly handled fresh pork that has been infested with *Trichinella Spirales*, a genus of a nematode which very often infects swine. In the early stages of the disease, the symptoms are loss of appetite, nausea, vomiting, periodic pains in the abdomen and diarrhea. This is followed by muscle soreness and sometimes very severe muscular pain. The disease may last for several weeks during which time there may be moderate to high fever, sometimes as high as 104° F - 105° F. A fairly high percentage of swine may be infected with *Trichina*. *Tarmia Solium*, pork tape worm also causes illness when infected.

(Food and Food Products Vol.1 M.B. Jacobs, Inter Science Publishers Inc. New York 1951, p.445.)

Flesh of Dead Animals: Early man sometimes became ill or died after eating the flesh of dead animals (Encyclopaedia Britannica 1981 Vol.5 P.864).

Blood as a Source of Disease: The *Streptococcus Viridans* organisms are found in the throats of 90 percent healthy persons. The same organism cultured from the blood strains is highly pathogenic and usually indicates the presence of the disease subacute bacteria) endocarditis (chronic bacterial invasion of the lining of the heart). Exotoxin that is produced by *Corynebacterium diphtheriae* which causes diphtheria, released into the surrounding tissues is absorbed into the blood stream from the local infection within the throat. Endotoxic infection typhoid: The organism creates a local infection within the intestinal tract and then spreads rapidly through the lymphatic system into the blood. Tuberculosis: if the infection spreads into the blood stream, seeding of any organ or tissue of the body may occur. The mechanism of transfer of agents of diseases to the blood is applicable to animals too: Examination of blood cells of cattle may reveal abnormal lymphocytic cells characteristic of leukemia. Low number of leucocytes in blood indicates the presence of viral diseases such as hog cholera and infectious hepatitis in dogs. Neutrophil levels in blood increase in chronic bacterial diseases, such as canine pneumonia and uterine infection in female animals. Elevated monocyte levels in blood occur in chronic granulomatous diseases e.g. histoplasmosis and tuberculosis. Canine parasitism and allergic skin disorders are characterized by elevated eosinophil levels in blood (Encyclopaedia Britannica 1981. Vol.5 P 855 - 873). In view of the above facts blood is harmful as food. Incomplete bleeding (during slaughter) encourages the spread of bacteria, the better and more sanitary the bleeding, the better will be the keeping quality of meat. (Food Microbiology by W.C. Frazier P. 266 Tata Mc Grawhill Publishing Co. Ltd. N.Delhi 1967) It is probably due to this

reason that in the Islamic way of slaughtering an animal for food, it is made to die due to excessive bleeding; which also minimizes many Other agents of diseases.

2. (5 : 90) Intoxicants: The social and financial evils associated with alcohol and drugs are well known. Clinically manifest brain damage, in its various forms, associated with prolonged hazardous consumption of alcohol is about as common as alcoholic cirrhosis. Among those who drink hazardously there will be found a spectrum of cerebral function ranging from complete normality to utter derangement. In the case of the individual patient with alcohol related brain damage, the disturbance may be so severe that he or she is unable to function effectively as an independent being. (Alcohol drugs and brain damage, Ed.. J.G. Rankin Addiction Research Foundation, Canada, 1975)

CHAPTER - 6

1. Ch. (6:73)Sur: The word 'Sur' translated as trumpet, also conveys the meaning of form or structure and inclination or attraction. Therefore blowing into the 'Sur' could also convey the sense of increasing or decreasing the gravitational force in the whole universe which would collapse it to a point, or totally disperse it.

CHAPTER - 7

1. (7 : 54) Arsh: Following is the summary of 21 verses of the Quran on the topic of 'Arsh' translated as throne which signifies Sovereign Power.

1. Before the creation of the skies and the earth 'Arsh' was on a fluid (Ch. 11 Vs. 6) (This may refer to the plasmic state before the Big Bang to be dealt with later).
2. After the creation of the skies and the earth balance was set on 'Arsh' (for) regulation of the affair (of the universe) (Ch. 10 Vs. 3).
3. Allah is the Owner of the 'Arsh' (Ch:17 Vs. 42).
4. Allah is the Fosterer/Manager of the 'Arsh' (Ch. 9- Vs. 129).
5. Angels go around 'Arsh' 39:7. This indicates that 'Arsh' occupies space.
6. Eight (angels) will bear the 'Arsh' above them (Ch. 40 Vs. 7, Ch. 69 Vs. 17). This indicates that 'Arsh' has weight.

7. '*Arsh*' therefore appears to be a place and something representing central control, it may be the capital of the universe and not the seat of Allah because nothing can encompass Him as He encompasses everything.

CHAPTER - 9

1. (9 : 25) Battle of Hunain (H. 8): This battle was fought at a place about 3 miles from Mecca. In this battle, muslims were more than ten thousand and outnumbered the enemy, the tribes of Hawazin and Saqeef being 4000. The large number of muslims led them to vanity with the result that they at first look to flight, but later the enemy surrendered. Contrary to Badr, in this battle muslims were more yet they initially faced defeat, this again establishes that victory does not depend on numbers but it depends on Allah's help.

2. (9 ; 38) Expedition of Tabuk (H. 9): There were many hindrances for the raising of an army sufficient to face the strong forces of the Roman Emperor.

1. Great drought. 2. The length of the journey/to the confines of Syria. 3. Ripening of the fruits which were ready to be plucked. 4. Hot weather and 5. Organised Roman army. The prophet (PBH) led an army of 30,000 muslims which reached the borders of Syria, but the enemy surrendered without war.

3. (9 : 40): During the journey from Mecca to Madina, prophet Muhammed (PBH) and Hazrath Abu Bakr took refuge in the cave of the Mount Sawr about 3 miles from Mecca. A serpent stung the heel of Hazrath Abu Bakr while he was closing the holes inside the cave. He tried to bear the pain but his tears fell on the face of the prophet (PBH) and awakened him, on learning the reason he rubbed the spot with his saliva and that cured the sting. A spider span a web on the entrance of the cave and a pair of pigeons built a nest and laid eggs. His enemies came in search of him right upto the cave but the spider's web and the pigeon's nest misled them and they went away.

4. (9 : 118): The three left behind during the expedition of Tabuk were Kab bin Malik, Halal bin Umayya and Mararah bin Rabi, they were all from Madina. Because they had not gone with the army of the muslims they were cut off from the community for fifty days. after which Allah finally forgave them.

CHAPTER - 10

1. (10 : 92): The body of Rameses 11, who is regarded as Firawn of Musa is preserved as a mummy in Egypt (Ency. Britanica).

CHAPTER - 11

1. (11 : 37): The ship appears to be the first invention of man but in accordance with Divine instructions. Are the later inventions and discoveries too products of Divine instructions of which man is not conscious?

CHAPTER - 12

1. (12 : 4) Heavenly bodies closely associated with the sun and the moon are planets, therefore the word Kawkab has been translated as planets.

CHAPTER - 13

1. (13 : 3) **Drifting Continents:** It is slated mat millions of years ago, all the southern continents formed one single land mass. Later they drifted apart to occupy their present positions. This is popularly known as the theory of 'Drifting continents. If one closely examines the world map, even today these continents appear to fit as a jig-saw puzzle.

2. (13 : 3) **Sedimentary Mountains:** When two land masses approach each other, the sediments at the bottom of the ocean between them get compressed and sometimes rise above the sea level as mountains. A good example of this is the Himalayan mountains which rose from the ocean named Tythus due to compression of India towards Tibet. In Arabic, the word 'Mursaha' is used for anchoring of ships in water. In this verse (3), the word 'Rawasiya' from the same root alphabets used for mountains could mean those mountains, the material of which was, originally deposited in water as sediments and later lifted up, that is, sedimentary mountains.

3. (13 : 41) Contraction of the Earth: This may refer to the contraction of the earth's crust while cooling from a very hot molten state to the present condition. Even today the major portion of the earth's interior is hot and in a molten state.

CHAPTER - 14

1. (14 : 33), (45 : 13) Anthropic Principle of the Universe: According to this principle proposed by many famous scientists, everything in the universe is fine tuned to suit human life on earth. (The Anthropic Universe, Martin Rees, New Scientist No. 115, 6th August '87, Page 44).



CHAPTER - 15

1. (15: 16) Galaxies: The word 'Najam' is translated as star and a galaxy contains millions of stars. The word 'Burooj means strong rooms constructed on the walls of forts for safety, it has also been used for conveying the sense of exhibition, places of safety, big stars etc. In view of these meanings, 'Burooj' may refer to the galaxies which also exist in millions.

2. (15 : 26) Origin of Life and Creation of Man:

Past Life: Biologists and palaeontologists have shown that life on earth was not the same in the past as it is now. This inference is drawn from the study of fossils, which are the resistant parts or moulds of extinct animals and plants preserved in sediments deposited in water. These fossils help us in deciphering how life evolved. Life has changed continuously, it was very simple in early stages but with passing time plants and animals became more and more complex. This observation has given rise to the theory that the present living beings have gradually evolved from ancestors which were different from them.

Origin of Life: Biologists going through the history of life are still trying to reach some point when life first appeared on this planet. The exact date is of course not known, but it is estimated that life might have made its first appearance somewhere between" 500 and 3000 million years back. Whether life appeared at one place on the surface of the earth at one particular instant of time or whether it was spontaneously created at various places and times is also not known.

Most scientists are of the opinion that life came into being on earth rather than arriving full-blown from outer space and that its coming into being involved the accumulation of non-living earthy materials into aggregates of molecules able to grow, react to environmental stimuli and reproduce themselves more or less faithfully generation after generation. The appearance of living beings is associated with the epoch when torrents of warm water fell from the sky on the slowly cooling surface of the earth forming extensive ocean basins which have always been recognised as the cradle of primeval life. These basins of deposition i.e. lakes, seas and oceans, in addition to other mineral matter, contained clays which are extremely small in particle size and various chemical elements in solution. Every organism seems to require at least 20 chemical elements and perhaps traces of several others. It may be no accident, that the elements essential to life are universally present in sea water. Water itself makes a major portion of all living beings. Following verses of the Quran appear to have a bearing on this subject: "And Allah has created every moving creature from water" (Q. Ch. 24, V. 45) "And He (Allah) it is Who created man from water.... (Q. Ch. 25, V. 54) According to most geologists, the earth during its early history was very hot, chemical activity must have been rapid and atoms were therefore, forming and reforming into many kinds of molecules. It is assumed that the young earth had an atmosphere, composed primarily of water vapour, ammonia and methane. It is reasoned that under such conditions, simple organic substances i.e. molecules containing several carbon atoms, might have formed. Methane, ammonia and water vapour contain the kinds of atoms needed to form aminoacids. The creation of self-duplicating and energy gathering molecules from aminoacids is the essential step in the appearance of life. The energy required to form these compounds could have come from the heat of the earth and from the electric energy of lightning. Over millions of years, an accumulation of such organic compounds within oceans, seas and lakes might have produced a kind of hot thin soup. In this thin organic soup, it is likely that simple organic compounds were concentrated, perhaps on clay flakes and ultimately bonded together to form the larger molecules that seemed to be the building blocks of all living things. Finally it is supposed that by eventually coming together these larger molecules might have formed a simple kind of "living thing". We can imagine a transition rather than a sharp line between complicated non-living things and simple living organisms. In 'the transition from dead matter to living beings, organisms like the virus might have developed which are crystalline like inanimate matter and multiply like living beings. Thus living creatures on earth appear to be a direct product of the earth. The transition of dead matter to living material and vice versa is confirmed by the Quran in the following words. "*Certainly, (it is) Allah Who splits the grain and the date stone (seed). He brings forth the living (animate) from the dead (inanimate) and He is the bringer forth of the dead from the living.*" (Q. Ch. 6. V. 96).

Evolution and Migration of Life: Evolution is the name given to the comprehensive plan of sequence in all natural events. Organisms are inherently plastic and capable of changing. This ability of life to assume various forms and to achieve various reactions in order to survive is the real significant theme that runs

through the past history of life. The implication of evolution is that all life has been derived from one or few simple living beings. The germs of life once they came into existence started an evolutionary course towards higher and more diversified forms. No new organism came into existence till its food in the form of lower plants and animals had already come into existence. Once established, life could spread rapidly as long as food sources were available. As food sources declined, competition set in and only the most efficient survived. Life was not stationary, organisms migrated, dispersed themselves in various directions from their place of origin according to prevailing Opportunities and conditions. The Quran states: "And there is not an animal in the earth nor a bird that flies on its two wings but (they are) communities (species) like those of yours..." (Q. Ch. 6. V. 38)

Life: Result of God's Will or Chance: One of the most important reasons which makes muslims discard the theory of evolution is that most of the supporters of this theory ascribe the origin of life to chance accumulation of matter in a particular form to give rise to life, they do not feel the necessity of believing God to be the Creator because they feel that chance, accidents, laws of nature, evolution etc., can explain everything from an atom to man and the universe. Following passage on 'Chance' by Mottram, a writer of science, might serve as a good argument against the possibility of things coming into existence by chance and thus convince us to accept God as the Creator. 'The inert lifeless matter of our planet sprang into life under the influence of natural forces and the simple living things so generated were gradually and slowly moulded by other natural forces into the multitudinous, wonderful, delightful, beautiful, intricate, grotesque, ugly but always entrancing manifestations of life around us i.e. we descend from specks of jelly-like living material which evolved out of inanimate matter. Scientists suggest that carbon, oxygen, hydrogen, nitrogen and sulphur kept on barging into each other, combining and recombining by chance, until accidentally, one day they gave rise to protein, and complex reactions of proteins constitute the phenomena we call life. By chance, in the past, something like virus, supposed to be the missing link between inanimate mater and living things, originated. Then all life evolved from them, it was all chance. Chance brought the required elements together. Chance enabled them to form protein. Chance enabled life to evolve, Everything from molecule to man can be explained by evolution and that is by chance. Charles Eugene Guye, a Swiss mathematician calculated the chance of manufacturing a single molecule of some simple protein-like substance and also the amount of material which would have to be shaken together to do it. The probability against protein 'happening' is very great indeed. The odds against winning the protein stakes are 100 multiplied by itself 160 times to one. Also the amount of material necessary to produce that one molecule is much greater than (lie material comprising the whole universe. Sixtillion, sixtillion, sixtillion times greater. For it to occur on one small planet it would need endless years, 10 multiplied by itself 243 times. It does not look probable that even simple proteins can be manufactured by chance. Prof. J.B. Leathes calculated, that the number of ways in which the protein links in the chain of a quite

simple protein can be put together, is 10 multiplied by itself 48 times. And the virus proteins are complicated proteins which consideration makes it all the more unlikely that chance made them. It looks as though an intelligent, purposeful mind must have stepped in when matter on earth had cooled sufficiently and created proteins and endowed them with life'. (Science in Perspective Denys Thompson, A scientific basis for belief in God.)

Creation of Man: If the principle of organic evolution is valid, man as a physical being has a succession of ancestors extending far back to the history of life on earth and in common with other plants and animals might have evolved from one or few simple living beings, having passed through various stages of plant and animal life, taking millions of years to reach his present form. This conclusion is based on indirect evidences such as, fossils, similarities in embryos and other biological aspects of man and some animals. Biologically, man is regarded as a vertebrate, a mammal and a primate. Let us see what the Quran states on the subject of origin of man:

Substance of Creation:

1. "He (Allah) it is Who created you from clay..." (Q. Ch. 6, V. 2)
2. "And We had created man from mud (containing sand and clay) with black (carbon particles) which had traversed..." (Q. Ch. 15, V. 26)
3. "And We have created man from something taken out from wet clay:..." (Q. Ch. 23, V. 12)
4. "...and He began the creation of man from clay." (Q. Ch. 32. V. 7).
5. "...We certainly created them (men) from sticking clay." (Q. Ch. 37, V. 11).
6. "*And Allah created you from the soil.*" . (Q.Ch.35.V.H)
7. "He created man from mud (containing sand and clay), like (that used in) pottery."

(Q. Ch. 55, V. 14) "When your Fosterer said to the angels I am creating man from clay, so when I set him in balance and I breathe into him of My spirit, then fall bowing down before him." (Q. Ch. 38, V. 71-72) The Arabic words used for indicating the material from which man's creation was started are teen, turab etc., which have been translated as clay, soil, mud etc.. probably to emphasise on the degree of fineness of the material used. Atoms, molecules and colloids such as clays, are finest materials known to science. Do the Quranic verses cited above, convey the meaning that man's creation was started from matter existing in a very fine state

such as atoms, molecules or colloids? While discussing the origin of the universe, we will see that the material from which the universe was created was hydrogen according to the science and smoke or vapour according to the Quran. Terms like smoke, dust, mud etc. are easily understood by common man, whereas the understanding of the terms like hydrogen, atoms, molecules, colloids etc., requires a scientific background, besides such words in Arabic language, were not in existence at the time of the revelation of the Quran. In a book like the Quran, which is to be read by people of all standards and all times, including those of the past generations when the knowledge of scientific subjects was definitely less than what it is now. general terms such as smoke, clay etc., are bound to be used. The reason applied for considering vapour or smoke to mean hydrogen can be applied in the case of origin of man and the terms clay, dust mud etc., could be taken to mean atoms, molecules or colloids. If, this reasoning is correct, then the material from which man was created would be the same both according to the Quran and science. Besides, clay or mud also contain organic matter and all are composed of atoms and molecules. We are, however, not sure whether the clay, or mud from which man's creation was started, belonged to the earth or some other heavenly body where according to cosmo-chemistry, atoms and molecules of various chemical elements including some organic compounds, have been found to occur. The Quran on the same subject further states; "And He (Allah) Is Who created man from the water.." (Q, Ch. 25, V. 54) "And Allah created every moving creature from water..." (Q. Ch. 24, V. 45). Do these verses indicate, that the creation of all living beings, including man, started in and from water which contained atoms, molecules and colloids of different elements and thus confirms the inference drawn by science that life originated in water or it refers to water which all living beings contain in their bodies or water that sustains life?

Place of Creation;

On the subject of place of creation of man, following verses of the Quran deserve consideration: "From it (earth) We created you and into it We shall send you back and from it will We raise you a second time." (Q. Ch. 20. V. 55) "...He knows you best when He brings you forth from the earth and when you are embryos in the wombs of your mothers, so do not attribute purity to your souls..." (Q. Ch. 53. V. 32)."And Allah has made you grow out of the earth as a growth, then He returns you to it, then will He bring you forth a (new) bringing forth." (Q. Ch. 71, V. 17 & 18) These verses may refer to mankind in general. Parents take food which is a product of the earth and which is & converted to sperm in man and egg in a woman, which again on combining give birth to human offspring. This would not only mean that mankind has been created from earth but also that mankind grew out of the earth as a growth, in a manner similar to plants which grow out of the earth by

taking their food from the earth. Contrary to this, if the above Quranic verses refer to the original creation of man, then clay, soil or mud from which man's creation was started, belonged to the earth.

Manner of Creation:

Let us try to find out from the Quran, the manner in which man reached his present physical state, whether through evolution i.e. bypassing through various stages of plant and animal life as believed by scientists or by first being moulded in the form of a statue of mud and life being put into him later, as narrated in various Islamic traditions other than the Quran. Following verses of the Quran deserve consideration in this regard; "There surely came over man a period of time when he was not a thing that could be spoken of. (Q. Ch. 76. V. 1) "Say: Travel in the earth and see how He makes (he first creation, then Allah creates the later creation; surely Allah has power over all things." (Q. Ch. 29. V. 20) Do these verses refer to past life and fossils which made scientists believe in the evolution of life?" And indeed He has created you through various grades." (Q. Ch. 71, V. 14) This verse could refer to various stages encountered during the birth of human beings or to stages of knowledge and civilization or to stages of evolution. "He it is Who has produced you from a single soul." (Q. Ch. 6, V. 99)

Does this verse indicate that the evolution of man started from a single living being, similar to the present day amoeba, which is capable of multiplying itself by subdivision; and thus confirms the inference of science that life originated through a single or few simple living beings?

CONCLUSION: If man is really the product of biological evolution, then scientists have correctly understood and explained the problem of origin and evolution of life. But understanding the mechanism of origin and evolution of life is no basis for denying the existence of God and ascribing all happenings to chance. In fact the mechanism of origin and evolution of man and the universe he lives in, which scientists have understood, should not only make them believe in the existence and powers of God but also make them bow down before Him in admiration. However convincing the theory of evolution might appear, it cannot be considered as the final word on the subject and as reliable as the Quran, which neither supports nor denies evolution in clear and understandable terms. In view of the facts that God transformed the wooden staff of Moses into live snake, he created Jesus Christ without a father and made him mould a live bird out of clay, the possibility of man having been created in the form of a statue of mud or some other manner cannot be totally ruled out. In the absence of conclusive scientific proof in support of evolution and decisive information from the Quran, it is difficult to state conclusively whether man is a product of evolution or was created in some other manner. One thing is definite: **ALLAH CREATED MAN.**

3. (15 : 28) Basheer Means an Informer: Does the word Bashr used for man also convey the sense, that man will be an informer, a news giver? If we analyze our social contacts, most of the time, we either receive information or give out information. In view of this how appropriate is the word Bashr representing man.

CHAPTER - 16

1. (16 : 4), (36: 77): The Arabic word 'Khaseem" means one who disputes, and every dispute involves a tussle. It must be an open tussle for one particular male sperm to reach and fertilize a specific female egg, overcoming the obstruction caused by millions of other sperms. The pronoun 'huwa' meaning 'he' may refer to man as a finished product or man in the making, in the form of a sperm in the womb, in which case the translation of the verse would be: "He created man from a sperm when he (in the form of a sperm) was involved in an open tussle."

2. (16 : 15) Theory of Isostasy: The mountains did not exist in their present place or form since the time of formation of the earth but were brought into existence later. Some mountains were formed due to volcanic action, some due to erosion of plateaus while others came into existence as a result of compression and elevation of sediments which had accumulated in seas and oceans, Himalayas being an example of this type of mountain ranges. These events took place during various periods in the earth's, history and lasted for very long periods of time. It has been suggested that the relationship of land surface to ocean floors is comparable to the floatation of light and heavy blocks. The land is high because it is of light material, the ocean floor is depressed because it is of heavy material. These ideas are embodied in the "Theory of Isostasy" which suggests that, there are a set conditions of these floating blocks i.e. mountains and ocean basins, which give equilibrium to our rotating globe, but which, if disturbed, will lead to earth movements. This implies that in the absence of mountains, the earth could have been in a continuous state of disturbance. In other words, mountains in addition to serving other purposes (controlling wind, rain etc.), keep the earth's crust in a balanced state.

CHAPTER .17

1. (17 : 1 & 60) Mi'raj: These verses probably refer to the event of Mairaj. The summary of details narrated by Muslim and Bukhari are:

1) Jibrael opened the chest of prophet Muhammed (PBH), removed and washed his heart to free it from evil and rejoined the chest after replacing the heart. 2) He was

then carried on Buraq (Barq means lightning) from Kaaba in Mecca to Masjid-i-Aqsa at Jerusalem where he worshipped (offered salat), 3) He was then taken beyond the regions of the earth. On the 1st level of the sky he met Adam, on the 2nd level Isa and Yahya on the 3rd level Yusuf on the 4th level Idris on the 5th level Harun on the 6th level Musa and on the 7th level Ibrahim (PBT). Finally he got the order making worship (salat) obligatory on every muslim five times a day and returned to the place on earth from where he was taken. All this happened in a very short period of time. Removal and replacement of heart, space travel and high speeds should not surprise us because it is a common feature today. When man who is created by Allah can do this every day then it must be much more easier for Allah.

2. (17: 13, 84): Does this verse refer to destiny and memory on which every thought and action, even dreams are recorded ?

3. (17 : 78): This verse appears to refer to all the five timings of worship (Salat).

CHAPTER - 18

1. (18 : 25): 300 Solar years are equal to 309 lunar years. The number of years is stated in both the systems probably to provide us with an exact equivalent.

CHAPTER 21

1. (21 : 30, 41: 9, 51: 47): Origin and Evolution of the Universe: The universe as we know it, consists of material objects such as, the earth, its occupants, all heavenly bodies like the sun, moon and the stars and everything in and around them including different types of energies associated with and independent of material objects, contained in space.

The universe did not exist in its present state since eternity but was created, as is evident from the following verse of the Quran; *"Your Fosterer is Allah Who created the skies and the earth in six periods of time, and He holds control on the throne."* (Q. Ch. 7, V. 54) Many scientists, based on the information got from the outward movement of the galaxies (expanding universe), have also concluded that the universe has not been existing in the present form since eternity.

Origin of Matter and Energy: The universe is made up of matter and energy, therefore their origin deserves a brief discussion. Matter is known to be made up of hundred and odd elements like hydrogen, oxygen, nitrogen, carbon, iron, gold, silver etc. Each element in turn is made up of atoms. An atom of an element consists of a nucleus containing neutrons and protons around which revolve electrons. Neutrons are electrically neutral, protons are positively charged and electrons negatively charged. There are a number of other subatomic particles, but to avoid making the subject highly technical they have not been included here. Atoms of different elements contain different numbers of neutrons, protons and electrons. The simplest atom is that of hydrogen which contains one proton in its nucleus and one electron orbiting it. The helium atom contains two protons and two neutrons in its nucleus with two electrons revolving around it. Thus atoms, the building blocks of matter, are composed of electrically charged particles which indicates that matter results when energy organizes itself in a specialized form and that there is no absolute difference between matter and energy. The evidence that the universe is expanding, has made scientists infer that the substance from which the universe was created, to start with, was concentrated at one place as an incredibly dense core of radioactive neutrons. The neutron decays by emitting an electron and thus becomes positively charged i.e, a proton. The proton or hydrogen nucleus is capable of capturing more neutrons, some of which decay to form protons within the nucleus, thus building up the nuclei of heavier and heavier elements. This has given rise to the conclusion that to begin with, the universe consisted entirely of hydrogen gas from which evolved all other elements. This synthesis and evolution of elements is believed to be taking place in the present day stars, too, where temperatures range from ten to hundred million degrees centigrade. George Gamow is of the opinion that 250 million years after the explosion (initiation of the expansion of the universe) radiation predominated matter and the matter of the universe remained dispersed as thin gas and later matter began to dominate over radiation.

From the above details we draw the following conclusions:

1. Once all substance of the universe was concentrated at one place.
2. The universe was once filled with hydrogen gas
3. Earlier radiation predominated matter and
4. The universe is expanding.

The initial concentration of the substance of the universe at one place is confirmed by the Quran in the following terms:

"Have not those who do not believe considered that the skies and the earth were both joined together, then We tore both of them asunder." (Q. Ch. 21, V.30) On the second phase i.e. the universe having been once filled with hydrogen gas, the Quran states: "Then He set the balance towards the sky which was smoke, so He said to it and to the earth: come both willingly or unwillingly. They both said: We come willingly." (Q. Ch. 41. V. 11)

This verse of the Quran indicates that, it was from the initial chaotic gaseous or vapourous phase that the matter which was to constitute the heavenly bodies was ordered to get separated and organised into seven skies (layers) referred to in note No. 3 under Ch. 2, Vs. 29. The third conclusion deserves some discussion. Hydrogen, the starting material contains one proton and one electron - both electrically charged particles. What was the source of these energised particles? Did they originate from the condensation of radiant energy? Was there a stage in the life of the universe when there was only radiant energy? The Quran does not state anything directly on this subject. The following verse of the Quran from Sura 1, Noor, (Verse 35) appears to hint at the answer: "Allah is the light (Noor) of the skies and the earth." The Arabic word Noor may mean light or radiance and in the language of science radiance would mean radiant energy or electro-magnetic radiation. Is it possible that before the creation of the universe there was nothing but Allah and His Radiance. Whatever be the source of matter and energy, according to the Quran (Ch. 16, V. 40) when Allah intends to do anything, He says to it "BE" and there it is still blooming with life. The fourth conclusion is supported by the Quran as follows: "*And the sky We constructed it with energy and We are the Expanders (of it). Ch. 51, V.*

Theories of Origin of the Universe: Geologists and astronomers generally agree that the universe, which consists of galaxies composed of stars, had developed from a great mass of gas that initially consisted mainly of hydrogen, the simplest of elements. There are two conflicting theories from the clue that the universe is expanding:

Steady State Theory: This theory proposes that matter which is lost by the recession of the galaxies due to continuous expansion of the universe, is replaced by newly created matter, so that the observed universe is maintained in a steady state, i.e. matter is being continuously created throughout the universe. This theory makes no mention of a specific initialing event in time or space. There is neither a beginning nor an end because matter is being continuously replenished in one place while it is being destroyed elsewhere.

Theory of Oscillating Universe: This theory is also known as the 'Super Dense Theory' or the 'Big Bang Theory'. It states that if the universe is expanding at, a known rate, then as we go back in time, the groups of galaxies must have been closer and closer and there must have been a time when all the matter and energy constituting the universe was concentrated at one place in the form of a super dense agglomeration. By working backwards, from the observed rate of recession of galaxies, it is found that they should have been packed close together some 15 billion years ago. At about this time, it is postulated, that there was a 'Big Bang', as a result of which the super, dense agglomeration was scattered into multitudes of fragments, all travelling with different speeds and in different directions finally condensing to form the present day heavenly bodies. The observed expansion of the universe is a continuation of this process. This theory concentrates on a specific event as the 'Beginning' of the universe and conceives of a progressive evolution from that point to the present. On the problem of the origin of the universe the two verses of the Quran cited earlier, deserve repetition: *"Have not those who do not believe considered that the skies and the earth were both joined together, then We tore both of them asunder....." (Q. Ch. 21. V. 30) "Then He set the balance towards the sky which was smoke, so He said to it and to the earth: come both, willingly or unwillingly. They both said. "We come willingly." (Q. Ch. 41. V. 11)* In view of these Quranic statements, the Theory of Oscillating Universe appears to be nearer to truth than the Steady State Theory which rules out a 'Beginning' and is therefore against the Quran. Only one aspect of the Steady State Theory is supported by the Quran, i.e. continuous creation of matter, as it is evident from the following verse of the Quran: *".....He increases in creation what He please, Allah certainly has power over everything." (Q. Ch. 35, V. 1)* Believing the Theory of Oscillating Universe to be correct, we can very well understand the meaning of the BIG BANG which was an important step in the creation and evolution of the universe and as a result of which the universe is still expanding. This 'BIG BANG' was probably the 'BE' ordered by Allah, about which the Quran states: *"Our word for a thing when We intend it, that We say to it only 'BE' and it is." (Q. Ch. 16, V. 40)* This 'BE' probably included the complete destiny of the universe; formation of stars, planets satellites, coming and going of man on the stage of the earth and even the end of the whole show. This statement finds support in the following verse of the Quran: *"We have created everything according to a programme (destiny - taqdir). And Our command is but one. as the twinkling of the eye." (Q. Ch. 54, V. 49 & 50)*

Prophet Muhammed (PBH) is reported to have said: 'Allah wrote the destiny (taqdir) of the creation, 50,000 years before the creation of the skies and the earth.... (Narrated by Abdullah bin Omer, Muslim.)

Evolution of the Universe: From the premordial gaseous matter which had started expanding after the 'Big Bang', galaxies started forming some 15 billion

years back. Within the slowly rotating gas, gravitational attraction gradually caused local condensation. The stars appeared when matter became sufficiently concentrated and compressed to emit energy through thermo-nuclear reactions involving conversion of hydrogen to helium. About 4.5 to 5 billion years back, the particular star which is known as the sun was still surrounded by a nebulous residue of gas and dust in which planets were forming. The earth achieved its separate existence about this time through accretion of solid material. The earth thus appears to be one of the billions and billions of heavenly bodies which originated in a manner similar to that in which the other heavenly bodies originated. It is stated that the skies and the earth were created in six periods, but nowhere is it stated that seven skies and earth were created in six periods. Skies are stated to be organised into seven levels in two periods: *"So He ordained them seven skies (higher levels) in TWO periods and revealed in every sky its affairs..."* (Q. Ch. 41, V. 12) The word Sama, rendered here as sky means higher or upper part of anything and hence indicates really what we see above us. This ordering of the skies into seven higher levels appears to have been done after (the) initiation of the creation of the skies and the earth.

2. (21 : 37); Man's hasty temperament seems to be responsible for most of his inventions involving speed. He has been inventing vehicles which have been progressively moving faster and faster and machines which keep on increasing the rate of production. Speed appears to be the summary of man's progress.

3. (21 : 104) Future of the Universe: It is a common observation and a fact hard to deny that everything created meets its end. Then what will happen to the universe, will it continue to exist forever or will it come to an end? This question has been haunting the minds of philosophers and scientists since centuries.

Heat Death of the Universe: In view of the law of entropy, the universe should one day meet its end. This phenomena is better illustrated by the help of an example: The chemical energy stored up in petrol is converted into heat by combustion and then into mechanical energy in (the) engine. The organised mechanical energy so produced results in the controlled and organised motion of the car, but an appreciable amount of the energy supplied is irrevocably dissipated in heating the roads as a result of friction of the tyres, heating the air through exhaust gases, and by overcoming air resistance, i.e. most of the energy is lost for ever in a disorganised manner. The extent to which energy is in a state of disorganisation is measured by a quantity called 'Entropy'. The higher the state of disorganisation, higher the entropy and the lower the state of disorganisation, lower the entropy. At absolute zero i.e. -273 degrees centigrade, when all atomic vibrations and motions stop, there is no disorder, consequently the entropy is zero. It is an observed fact

that the total energy of the universe tends to become more and more disorganised and consequently we may say that the entropy of the universe is always increasing. If every part of the universe is at the same temperature there will be no energy for use, because heat flows from hotter to colder bodies and not vice-versa without application of external energy. This would be the ultimate state of disorganisation or degree of disorder of energy in the universe, because all molecular and atomic motions would be at random and they would be unable to impart a uniform motion to other atoms of matter. Were this to happen, the entropy, i.e., the degree of disorder of the universe would be at its maximum. This condition is known as the 'Heat death of the universe'. If the universe is regarded as a closed system subject to the second law of thermo - dynamics, it not only follows that it will have a finite end but also that it had a finite beginning, for had it been created an infinite time ago it would have by now inevitably suffered its Heat Death. According to the Steady State Theory, which we briefly discussed earlier, the universe neither had a beginning nor has an end, but according to the theory of Oscillating Universe, which is more in agreement with Quranic facts on the subject of the origin of the universe, the universe will come to an end and will be recreated. The Quran, on the end of the universe, in no uncertain term states: *"We did not create the skies and the earth and what is between them save with truth and (for) an appointed term..." (Q. Ch. 46, V. 3) "Allah is He with Whom is the knowledge of the hour..." (Q. Ch. 31, V. 34) "And Allah's is the unseen of the heavens and the earth and the matter of the hour (end) is but as the twinkling of an eye or it is nearer still, Allah certainly has power over everything."(Q.Ch.16. V.77)* It was reported in New Scientist of 19th Jan. '91, page 21. The crunch (final collapsing of all galaxies) will happen within a period of one divided by ten followed by 42 zeros of a second.'

The Earth: The earth, it is said is passing through a revolutionary epoch when its crust trembles and crumbles under the action of the accumulating internal stress. We expect but are unable to predict the date of the future catastrophe that hangs over our head, nor can we say much about the symptoms that will announce its approach. These symptoms, it is believed, will consist of strong earthquakes, volcanic eruptions and general motion of the ground. What scientists predict is confirmed by the Quran in the following words; *"When the earth will be shaken with a (severe) shaking, and the mountains will be made to crumble with (an awful) crumbling, so that they shall be as scattered dust." (Q. Ch. 56, V. 5 to 6) "The day on which the earth shall cleave asunder under them, they will make haste; that is a gathering together easy to Us." (Q. Ch. 50. V. 44) "And the mountains shall pass away, passing away (altogether) (Q: Ch. 52. V. 10). "And they ask you about the mountains. Say: My Fosterer will carry them away from the roofs, then leave it a plain smooth level. You will not see therein any crookedness or unevenness. (Q.Ch.20. V.105 to 107) "And when the trumpet is blown with a single blast, and the earth and the mountains are borne away and crushed with a single crushing, on that day shall the great event come to pass, and the heavens shall cleave asunder, so that on that day it shall be frail." (Q. Ch. 69, V. 13 to 16)*

The Moon: The moon may be strongly dragged towards the earth. It may take more than 100 billion years before moon comes close to the earth and breaks to pieces by strong gravitational forces and forms something like the Saturn's ring around the earth.

The Sun: Based on studies of life histories of stars, scientists predict that the sun, which is a typical star, will become more and more brilliant from century to century. Towards the end of about 10 billion years the sun will be about hundred times brighter than it is now. By that time the surface of our planet would be heated to about the boiling point of water, the oceans would have evaporated and the earth's atmosphere would be heated to such a degree that most of it would probably escape into interplanetary space. No life will be possible on earth and all inhabitants will perish. The sun will once more demonstrate its might and burst into a brilliant display of fire works. But this later effort of the sun will last for a few days and after the explosion, the star, in this case, the sun as we call it, proceeds only more rapidly towards its ultimate state of darkness and a lifeless celestial body. A few years later after the smoke of the explosion is cleared off, we will find the dying sun surrounded by its family of cooling planets, The Quran summarises the whole affair as follows: *"And the moon becomes dark and the sun and moon are brought together." (Q. Ch. 75.V.8&9.)*

The Universe: It was seen earlier that the universe consists of countless number of galaxies and each galaxy contains millions and millions of stars, the sun being only one of them. The description of the fate of the sun given above therefore, holds good for all the stars. The Quran on (the fate of the stars, states: "What you are threatened with must come to pass, when the stars are made to disappear, and when the sky is rent asunder, and when the mountains are carried away as dust." (Q. Ch. 77. V.7-10) *"When the sky becomes cleft asunder, and when the stars 'become dispersed." (Q. Ch. 82. V. 1 & 2.) "When the sun is covered, and when the stars darken, and when the mountains are made to pass away." (Q. Ch. 81, V, 1 to 3.) "For they think it to be far off, and We (Allah) see it near. On the day when the sky shall be as molten brass, and the mountains shall be as tufts of wool;" (Q. Ch. 70. V. 6 to 9) At present the universe is expanding i.e. various groups of galaxies are receding away from each other, just as spots on a balloon recede away from each other when the balloon is inflated, each spot representing one group of galaxies. The problem before scientists is; Will the universe continue to expand forever? The answer to this question depends upon how much matter there is in the universe. If the mass of the universe is less than a certain critical mass, then the gravitational force between the heavenly bodies will be insufficient to halt the expansion and the galaxies will continue to recede away from each other forever. But if the amount of*

matter in the universe actually exceeds the critical mass, as indicated by some recent measurements which need more confirming evidence, gravity will eventually stop the expansion and the universe will begin to collapse upon itself i.e. all galaxies containing all the stars, planets, satellites etc., will start traveling back towards a common center and the universe will then concentrate itself in a very narrow space (the crunch). The mechanism of the collapsing galaxies can be understood by means of the example of (the inflated balloon with spots representing groups of galaxies. If the inflated balloon is cut with a sharp blade, the whole balloon will suddenly collapse and the spots representing groups of galaxies, which were quite far off from each other would suddenly get concentrated in a very narrow space. In the case of the universe, the collapsing galaxies may clash with each other with such tremendous force that everything will perish in fiery chaos. All bodies, including of course mankind and their dead bodies, and all atoms of the world will dissolve into a nuclear fluid of the primeval atom. Does the following verse of the Quran refer to this state of affairs; *"And there is none of you but shall come to it (hell); this is an unavoidable decree of your Fosterer. Again We will deliver those who guard (against evil), and We will leave the unjust therein on their knees."* (Q. Ch. 19. V. 71 & 72.) The above description of the collapsing universe serves to be a sort of explanation of the following verses of the Quran: *"And when the sky has its covering removed. "* (Q. Ch. 81. V. 11) *"On the day when the sky shall move from side to side."* (Q. Ch. 52. V. 9) *"When the sky becomes cleft asunder and the stars become dispersed. "*(Q. Ch. 82, V. 1&2.) *"The day of decision is appointed, the day on which the trumpet shall be blown so you shall come forth in hosts, and the skies shall be opened so that it shall be all openings."* (Q. Ch. 78. V. 17-19). *"And they have not honoured Allah with the honour that is due to Him; and the whole earth shall be in His grip on the day of resurrection and the skies rolled up in His right hand."* (Q. Ch. 39, V. 67). *".....And Allah's is the heritage of the skies and the earth..... "* (Q. Ch. 3. V. 179.)

Recreation of the Universe: It is further predicted by scientists, that the single super dense ball of matter and energy i.e. the primeval atom (the crunch) formed from collapsing galaxies will rebound and the explosive expansion will produce a new generation of galaxies, stars, etc. as before. The Quran has its own majestic way of describing this event: *"The day We will roll up the sky, like the rolling up of the sheet for writings. As We began the first creation, We will get it reproduced, a promise (binding) on Us: We will certainly do it."* (Q. Ch. 21. V.104). Could there be a better agreement between the Quran and science as on this subject? Human mind is sometimes doubtful, sometimes astonished and puzzled how will such a great event take place are these facts or fairy tales? The Quran replies: *"Do they not consider that God Who created the skies and (the earth is able to create their like?.... "* (Q. Ch. 17. V. 99.)

The universe seems to be oscillating i.e. expansion followed by contraction and vice versa. The duration of one expansion and contraction is said to be 30,000 million years. In each oscillation, all structural phases of the previous cycle repeat

themselves, without however an eternal recurrence of all things. It is quite possible that the universe has already started collapsing but we have not yet received the signal because of the distances of the further most galaxies, light from which would take millions of years to reach us. Scientists, while predicting the time of this great event i.e. the end of the present phase of the universe, speak of millions of years whereas the Quran states: "*For they think it to be far off, and We see it near.*" (Q. Ch. 70, V. 6 & 7)

CHAPTER - 22

1. (22 : 5) Birth of Man: Cell; The smallest part of a living thing that can carry on a separate existence is known as a cell. The outer boundary of a cell is a membrane within which is a clear viscid material called cytoplasm, floating in cytoplasm are a number of bodies, amongst the most important of which is the nucleus. Inside the nucleus are thread like bodies called chromosomes. The chromosomes contain a large number of particles called genes which are units of heredity, i.e. heredity is determined by genes that are handed down from one generation to another. There are genes that determine the physical characteristics of the off-spring such as colour of eyes, hair, skin etc. According to latest research reports there are genes that even determine and direct the behaviour of offspring and fix the lifespan. Some genes are known to be active while others suppressed.

Fertilization: The male reproductive cell is known as the sperm while the female reproductive cell egg, Life cycle begins with the fusion of these two cells, i.e. fertilization of the egg by a sperm which gives rise to a single cell known as the zygote (1). This zygote contains chromosomes and associated genes from both the father and the mother, i.e. it contains all the genetic information from both the parents and in the course of subsequent cell division uses this information to direct the differentiation of cells into tissues and organs and ultimately into a mature organism. If the genetic information received from parents is taped, its length will be 93 million miles.

Developmental Stages of the Child In the Womb: The zygote passes through a series of developmental steps. The process called cleavage, is the first such step after fertilization. Cleavage involves a process of cell division without significant growth i.e. the zygote (single cell) divides into two, these two cells again into two each i.e. four, these four into [two each i.e. eight and so on. The one-celled zygote thus divides and subsequent cells continue to divide repeatedly while adhering to each other. At the end of cleavage the organism consist of a ball of many cells, not very much larger in aggregate than the original egg. However, each cell has received a complete set of genes during its creation by cell division and therefore has a full compliment of genetic information. By the time cleavage has produced several hundred cells, the zygote has typically become a hollow ball of cells — the blastula (2). The appearance

of blastula signals the end of information distribution and job assignment stage of early zygote formation. During the next stage, gastrulation, the cells of zygote begin to grow and to differentiate into kinds of cells that are clearly different from one another. Cell multiplication of course continues. With the advent of tissue formation, the new organism henceforth carries the title of embryo (3). As the embryo continues to differentiate and develop, the middle layer (mesoderm) produces bones, muscles, heart and the circulatory system. It also produces organs of the excretory system and the reproductive system. The duct which develops early in the blastula becomes a cup-like cavity in the gastrula and ultimately develops into the alimentary canal with mouth at one end and anus at the other. The inside or endoderm lining of this cavity differentiates to produce gut, stomach and intestine as well as other glands and organs such as pancreas, liver and lungs. The ectoderm (outer) produces those cells (that will ultimately become skin, some of which will produce pigments and others hair. One region of the ectoderm forms a hollow tube that differentiates to become the nervous system. Three weeks after fertilization, the human embryo is about the size of a small nail head and three quarters of it is head structure. Four weeks after fertilization, the eyes are partly developed and the heart is already beating. Limb buds (hands and feet) appear in the fifth week, ears are elaborated at that time and the embryo now responds to mechanical stimuli by muscular contraction. Human form is vaguely recognizable eight weeks after fertilization when the embryo is about one inch long. From this stage on one speaks of foetus (4). Rather than an embryo. In man much of the skeleton is prepared in cartilage during embryonic stages, but this supports are then gradually replaced by bones in most of the skeleton. By the 12th week fingers are formed; the semi-circular canals in the ears are functional and the embryo moves jerkily but in balance, within its amniotic water pool. Eye lids are still fused yet the eye ball may rotate underneath. Five months i.e. (20 weeks) after fertilization, the foetus is about eight inches long and weighs about one pound and the facial features show signs of individual personality In the ensuing weeks breathing machinery develops rapidly. The foetus is now in perpetual drowsy state neither sleeping nor waking. In the eighth and ninth month wakefulness occurs increasingly. Arms and legs are moved frequently and the hands open and close. In nine months the microscopic fertilized egg has multiplied from one cell to 50,000 billion cells. Following verse of the Quran have a bearing on this subject: *"....and He began the creation of man from wet clay. Then He made his progeny from something taken out of [the fluid which is weakened after vigour. Then He set him in equilibrium and breathed into him of His spirit, and made for you the ears and the eyes and the hearts; little is it that you give thanks. "(Q. Ch. 32. V. 7 to 9)*

2. *"And We have created man from something taken out from wet clay. Then We made it (nutrients) sperm in a settling place, then We proportioned the sperm (into) that which clings and hangs like a leech, then We proportioned that which clings and hangs like a leech (into a thing like) chewed flesh, then We proportioned (the thing like) chewed flesh into bones, then We clothed the bones with flesh, then We proportioned it into another proportion (creation). So blessed be Allah, the Best of proportioners. (Q. Ch. 23. Vs. 12-14)*

3. "We certainly created man from a sperm mingled... (Q. Ch. 76, V. 2)

4. "...He created you in the wombs of' your mothers creation after creation in triple darkness..." Q. Ch. 39. V. 6)

5. "He it is Who shapes you in the wombs as He likes..." (Q. Ch. 3. V. 5.) Something taken out of the fluid could be the sperm, mingled sperm, the zygote, that which clings and hangs like a leech, the blastula, (the thing like) chewed flesh could mean the embryo in which bones develop and the later stage could be that referred to by scientists as the foetus. On this subject too, words that could be easily understood by a common man have been used, as in other cases where smoke was used for hydrogen and clay, mud etc. for atoms, molecules etc. Only the Creator could have described these hidden events so correctly 1400 years back an age of ignorance compared to the present state of scientific knowledge. This topic has been dealt with in detail in the following books:

1. The Bible the Quran and Science. Maurice Bucaille 1977

2. What is the origin of man. Maurice Bucaille 1983.

3. Human Development as revealed in Quran and Hadis, Md. Alt Albar 1986.

4. The Developing Human, Keith L. Moores and Abdul Majeed Zandani 1983.

2. (22 : 27) 'Fijaja' means wide or broad (21 : 31), therefore 'Fijjin' may mean breadth and accordingly 'ameeqin' would mean length. The word Azzamru means lean and 'Azzameer' means hiding of something, hidden etc. Aeroplanes and ships not only appear lean from a height or a distance but the passengers are also not visible from a distance. This verse appears to predict that people will come for Hajj from all over the world, from different latitudes and longitudes which geographically mean depths and widths, traveling by road, sea and air.

CHAPTER - 24

I. (24 : 11) When prophet Muhammed was returning from the expedition against: Bani Mus-taliq in 5th year of Hijra, Hazrat Ayesha his wife who had accompanied him went out in search of her lost necklace. In her absence supposing her to be in her howdah the caravan started for the onward journey while it was still dark. She was thus left behind and next morning found by Safwan, a Muhajir who had been left behind the camp to pick up forgotten articles. He brought her back to the caravan. Some enemies from among the hypocrites started spreading false reports slandering her. Hazrat Ayesha's innocence was established by this revelation.

2. (24 : 43) The tremendous amount of water that falls down from the sky flooding large cities on the earth should make us realize that all this water before falling down as rain, was held up in the form of clouds, suspended in the sky. In the troposphere, the layer of atmosphere immediately above the earth, the temperature decreases with increase; in height. In view of this, clouds are mountainous volumes of coolness, the proof of this coolness is hail which falls down in the form of small pieces of ice and also snow fall.

CHAPTER - 25

1. (25: 32, 59 : 21) In verse 15 of Ch. 5 of the Quran and elsewhere, the Quran is stated to be light (noor). Scientifically it has been established that light exerts pressure. In verse 21 of the 59th chapter of the Quran it is stated: "*Had We sent down this Quran on a mountain you would have seen it fallen down splitting asunder due to the fear of Allah*". It is reported that when portions of the Quran were sent down on the messenger of Allah while on the camel back, the camel used to sit down due to the load. the messenger of Allah himself used to perspire[*]. (Seerat -un-Nabi by Syed Sulaiman Nadvi, 1928, Vol 3. P. 302-303). It was probably due to this reason that the whole Quran was not communicated all at once. It would probably not be possible for a human heart to bear the pressure which could crush a mountain. The first portion of the Quran consisted of only five verses (96 ; 1-5), then the second installment (Ch. 74) was communicated after a long interval, the whole Quran being communicated in small portions, in a span of twenty three years, probably to dissipate the tremendous pressure inherent in it.

2. (25 : 53) (35: 12) (55: 19-22) Barrier Between Two Seas: This phenomenon is well known and often seen whereby immediate mixing of salty sea water and fresh river water does not occur. The Quran refers to this in the case of what is thought to be the estuary of the Tigris and Euphrates where they unite to form what one might call a sea over 100 miles long, the Shatt Al Arab. Rivers with very large outflow, such as Mississippi and the Yangtze, have the same peculiarity: the mixing of their fresh water with the salty water of the sea does not often occur until very far out at sea. (The Bible, The Quran and Science Maurice Bucaille. American Trust Publication 1977, PP 179-180). Differences in surface tension might be the reason for non mixing of the two waters.

CHAPTER - 30

1. (30 ; 3) The Lowest Spot on Earth: The word 'Adna' means both nearest as well as lowest. The place of war where the Romans were defeated is by no means near Mecca. Prof. Alison R. Palmer an American geologist pointed out that the place of war referred to in verse No. 3 is in Jerusalem and it is the lowest spot on earth according to the contour map 400 metres below sea level. (This information is given in the video cassette prepared by Qatar Television in association with Department of Quranic Scientific Revelation and Prophetic deeds, presentation by

Abdul Majeed Zindani, produced by Ibrahim al Saliti and directed by Muhammed al Fadala, circulated by Commission on Scientific Signs in Quran and Sunnah, Makkah al Mukarramah, Saudi Arabia).

CHAPTER - 32

1. (32 : 8) The word 'Maheen' not only means disgraceful but also something weakened after vigorous exercise. The latter meaning which suits the context, has therefore been adopted here.

CHAPTER - 33

1. (33-9) **Battle of Trench (5 H):** This relates to the siege of Madina by the combined forces of the Quraysh and their allies numbering 24,000, while the Muslims were only 3000. A trench was dug around Madina for the security of the city. Both parties remained in their camps for nearly a month without any other acts of hostility than shooting of arrows and slinging of stones. Finally a strong wind blew for 3 continuous days and uprooted all the tents of the enemy. This disturbed them to such an extent that they had to go back disappointed. During the period of the siege there was more of tension than any act of hostility.

2. (33 : 40) Prophethood remained only in the progeny of Ibrahim through his sons Ismael and Ishaq. The last prophets among the descendants of Ishaq were Isa ibni Maryam and Yaliya who were not married and were childless. The last prophet among the descendants of Ismael was Muhammed (PBH) whose sons died in childhood. In view of this, prophethood in the progeny of Ibrahim was not carried forward. This proves that prophet Muhammed (PBH) was the last and the seal of prophethood.

CHAPTER - 37

1. (37 : 1-3) These verses may refer to angels.

2. (37 : 5) Words like Mashriq, Maghrib, Masjid etc. indicate both place and time of sunrise, sunset, salat etc.

CHAPTER - 39

1. (39 : 42): The 'nafs' is something that is taken away from us by Allah at the time of death and during sleep, when we are biologically alive but unconscious. 'Nafs' translated as 'soul', 'mind,' or 'self' is therefore our state of consciousness which is present in us when we are awake and which is responsible for our deliberate actions. It is the unseen inner self which we can recognize when we say 'I', 'me', 'my' etc.

CHAPTER - 41

1. (41 : 10): Four Major Geological Eras of Earth's History: The sequence of deposition of sediments, the mountain building events and evolution of plants and animals are major factors that provide data for compiling the geological history of the earth which is divided into FOUR major eras :

1.Pre-Cambrian Era : (600 to 3300 million years)

During this era the earth evolved from its original state when it became a separate planetary body. This era ends at a point when life became abundant and diversified. The formation of continents on the surface may have commenced rather early. The atmosphere and water of the earth was essentially in their present state by the end of the era.

2. Paleozoic Era : (230 to 600 million years)

An era of ancient life. The early paleozoic was generally quiet, with volcanism and mountain building activity at a low ebb. The early paleozoic was an age of marine vertebrates. All the major phyla were in existence and the seas were teeming with life. The first land vegetation appeared in this period. The interval closed with an intense mountain building movement (Caledonian) in north-west Europe and the continents became relatively higher. Signs of glacial action have been found in Africa, Australia, South America and India. This feature and similarity in fossil forms (remains of dead animals and plants) and igneous activity, is considered by many geologists to indicate that, all southern continents were then joined in one super land mass called the Gondwana Land. The late paleozoic was a time of evolution and expansion of land life. Amphibians and reptiles appeared in this era.

3. Mesozoic Era: (63 to 230 million years)

An era of middle life. The drifting apart of the continents of the Gondwana Land is supposed to have occurred during this era. Mesozoic life was in transition. Plants

became better adjusted to dry land environment and to seasonal changes. On land reptiles represented by the dinosaurs were dominant vertebrates. Mammals and birds appeared in this era.

4. Cenozoic Era: (Recent times to 63 million years)

This era pertains to present life. Mammals were the dominant form of land life. Birds and fishes continued to evolve in their respective environments and became highly specialized. Plants migrated widely. Grass became the dominant vegetative form in temperate regions. Many raw materials came into existence, oil, gas and coal were formed and many deposits of metallic minerals were formed in association with igneous activity.

During the last million years the climate of the earth has been such that glacial accumulated over at least 27 % of the land. The ice age caused great disturbance in the organic world. Plants and animals were forced to migrate with changing climates and there was an overall reduction in the organic productivity of the land. There was noticeable extermination specially amongst the larger mammals, but the greatest extinction seems to have occurred after the last glaciation was over. These adjustments were a sort of prelude to the appearance of man which was a climatic event in (the history of the earth. Man had appeared somewhere in the interglacial periods.

This division of the geological history of the earth into FOUR eras, is not haphazard or at random but is based on breaks in the sequence of deposition of sediments - the physical discordance known as unconformities. These four geological eras, arranged in what is called the Geological Time Scale, are universally accepted as a basis for worldwide correlation.

The FOUR geological eras indicate the development of life, (i.e. plants and animals which are food for higher organism), drifting of continents, mountain building activity etc. The Quran also states that the provision of food, i.e. creation of plants and animals and making of mountains was completed in FOUR periods. Is the mention of Four periods in the Quran, for provision of food and making of mountains just a coincidence or a 1400 year old confirmation of the findings of the geologists?

2. (41: 53): The exhibition of signs in the horizons and within ourselves may refer to the tremendous burst of knowledge in the fields of cosmology and biology.

CHAPTER - 42

1. (42 : 32): This comparison appears to be a hint to mankind that mountains too extend deep into the earth like ships in water.

CHAPTER - 45

1. (45 : 13): The skies and the earth have been created to serve man. Scientists who have proposed 'The Anthropic Principle of the Universe' also agree that everything in the universe is designed to suit human life on earth. Is the Kaaba a guide for the rotational, revolutional and multi directional movements of the heavenly bodies in the universe? Or does the verse (3:96) convey the sense that Kaaba has been the source of guidance for human beings right from the beginning and would continue to be so till the end?

CHAPTER - 48

1. (48 : 10; 48 : 18): Treaty of Hudaibiya and the Allegiance (H. 6): Along with 1400 muslims, prophet Muhammed (PBH) started from Madina with the intention of visiting Kaaba at Mecca for Umrah. He camped at Hudaibiya from where he sent word to the Meccans through various people including Hazrath Osman that he had come only for Umrah. The delay in Hazrath Osman's return and a rumour that he was killed, made the muslims swear an allegiance to prophet Muhammed (PBH) (under a tree) that they would defend him at all costs and die fighting at his side. But later Hazrath Osman returned safe. The Meccans refused permission but an agreement was made that the Muslims would be allowed to perform Umrah, the following year. Many other things were also agreed upon. This treaty proved to be a great victory because war had become a barrier between muslims and non muslims, now both parties met freely which made propagation of Islam easier.

2. (48 :18) Campaign of Khaiber (H 7): Khaiber was the stronghold of Jewish tribes; where all enemies of muslims had gathered and organised themselves for a war. The prophet (PBH) led a campaign against Khaiber, conquered the fort and made the Jews surrender.

3. (48 : 24): Conquest of Mecca (8 H): The Meccan non-muslims broke the treaty with Muslims, therefore all Muslims capable of participating in war marched against Mecca under the leadership of (prophet Muhammed (PBH)). The Meccan non-muslims were not able to put up a fight with the mighty force of muslims and surrendered without a war. The Meccan non-muslims expected severe punishment from muslims due to the tortures they had inflicted on them earlier, but the prophet (PBH) forgave all except a few criminals. History has witnessed Prophet Muhammed (PBH) and his companions entering the holy city of Mecca with the humility of pilgrims, heads bowed down and hearts full of Allah's fear. No one could guess that they were conquerors of Mecca the very place from where they were

forced to flee. The announcement of general forgiveness brought, so great a relief that practically the whole population of Mecca rushed to surrender and a large number of Meccans immediately accepted Islam.

CHAPTER-51

1. (51 : 1-4) These could be angels.

2. (51 : 7) The word Hubuki translated as ways, also means: to tie and strengthen, waves of sand and curvature. In view of this it is evident that the sky is full of curved orbits in which the heavenly bodies move as if strongly tied together and do not deviate from their path, a fact revealed 1400 years back.

CHAPTER - 54

1. (54 : 1) **Splitting of the Moon:** The splitting of the moon refers to the famous miracle which prophet Muhammed (was made to perform when the moon appeared cloven in two parts. This incident is related by a number of his companions and is accepted as correct by both Muslim & Bukhari. There is a very old tradition in south-west India (Malabar) that Chakrawati Farman, one of their kings had observed, the splitting of the moon.

CHAPTER - 55

1. (55 : 7-9) **The Universe is Expanding:** The masses of the heavenly bodies and with them the mutual gravitational attraction increase with increase in the velocity of expansion. If the velocity of expansion of the universe increases beyond a critical value, the masses of the heavenly bodies and consequently the mutual gravitational attraction between them will increase to such an extent, that the whole universe will collapse (the crunch). Scientists point out that the universe is closely balanced between runaway expansion and violent collapse. Probably this is the balance hinted at through these verses.

CHAPTER - 57

1. (57 : 25) **Iron Sent Down:** The ultimate stellar ash is made up of iron. In iron atomic nuclei are packed as tightly as possible. Iron is the heaviest element that gets synthesized in a star by standard nuclear burning. It has the most stable nucleus. The energy required to synthesize iron is not available on earth, therefore the iron

found in the earth must have been synthesized in outer space. (1. New scientist Jan, 13th 1990. 2. Journal of Chemical Education Sept. 1990. 3. Video cassettes, referred to in note 30:3). In view of this the word Nazala meaning sent down, not only shows that the Crust iron present in the earth, the major portion of the core being composed of it, was sent down from outer space, but also indicates that the origin of the earth and other planets was associated with a star, in this case (the sun where temperatures and energies are of very high order, and thus confirms the findings of science.

CHAPTER – 58

1. (58 : 7) Allah numbers Himself as fourth, sixth etc. probably to indicate that He is different from the creation.

CHAPTER 59

1. (59 : 7): Water flows from a higher level to a lower level, electricity from a higher potential to a lower, similarly wealth is a current and it should flow from the rich to the poor. This natural law appears to be emphasised in this verse.

CHAPTER - 65

1. (65 : 12) Seven Layers of the Earth: The body of our planet consists of a number of concentric shells of different materials arranged in order of increasing density. There are similar concentric shells in the atmosphere above the surface of the earth but associated with the earth. The troposphere, which contains oxygen in a proportion suitable to sustain life on earth and clouds which give rain to the earth for (the provision of food, is in direct contact with the crust on which we live and from which we derive direct benefits. If troposphere and the crust, with which we are in direct contact are clubbed as one layer, then we have the following seven concentric layers which may be the seven similar layers referred to in the verse under review:

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- 7. Exosphere - Higher than 500 km
- 6 Thermosphere - 85 km - 500 km high
- 5 Mesosphere - 50 km to 85 km high
- 4 Stratosphere - 17 km to 50 km high
- 3 Troposphere - Sea level to 17 km
- Crust - About 40 km deep
- 2 Mantle - About 40 Km to 3000 Km deep
- 1 Core - About 3000 Km to 6400 Km deep

CHAPTER - 69

1. (69: 16): The word 'Wahiyatum' means weakening of the links through which something is tied. The heavenly bodies are supposed to be held together by the force of gravitation.

CHAPTER - 75

1. (75 : 8-9) This may refer to the folding up of the planetary system at the end of this phase of the universe. Also see (81 ; 1) and (82 : 2)

CHAPTER - 77

1. (77 : 1-5): These verses may refer to winds or angels.

CHAPTER - 78

1. (78 : 13): The sun is a typical star in which hydrogen burns and gets converted to helium and in this process gives out light like a lamp and heat like a furnace.

CHAPTER - 79

1. (79 : 1-5): Probably refer to angels performing different duties.

2. (79 : 7): When an earthquake occurs, the first waves which cause disturbance are the P - waves followed by the S - waves. Two more types of waves, Rayleigh waves and Love waves also contribute to the destruction. In vs. Nos. 6 and 7 too it is pointed out that an earthquake consists of succession of disturbances.

3. (79 : 28): The word 'Samak' also means fish as it is raised in the middle. Does this verse refer to our galaxy, the milky way, which is thicker at the center, the whole galaxy resembling two saucers inverted one over the other.

4. (79 : 31): Rain water belongs to earth. Its the water that evaporates from oceans, seas, lakes etc. and falls back as rain.

CHAPTER - 80

1. Verses 1 - 10 refer to the occasion when prophet Muhammed (PBH) was busy with dignitaries of Quraish explaining to them Islam when a poor blind man Ibni Umm Maktoom, unaware of prophet's (PBH) preoccupation, repeatedly interrupted him requesting him to teach him some verses of the Quran. This made the prophet frown.

CHAPTER - 81

1. (81 : 1): All planets with their satellites are revolving around the sun. Probably before the end of the universe the gravitational pull of the sun will increase to such an extent that all the planets and their satellites may revolve closer and closer to the

sun as if being wound in it and finally plunge into it. This explanation is also applicable to (75 : 8-9) and (82 : 2)

2. (81 : 2): Many stars are reported to collapse on themselves due to increase in gravity and thus end as black holes which have such high gravity that even light cannot escape out of them. Stars becoming hazy might refer to a stage when they are about to get converted to black holes, so that with lesser light coming out of them they appear hazy and this in turn may refer to the end of the present phase of the universe.

3. (81 : 5): This may refer to present zoological parks and animal sanctuaries.

4. (81 : 6) and also (82 : 3): This flooding of oceans may be due to melting of polar ice caps as a result of the green house effect of the contradiction of the earth or severe earthquakes etc. before the end of the world.

5. (81 : 8): Some people considering the birth of a female child disgraceful, used to bury it alive.

6. (81 : 10): This may refer to the pages of records of deeds or to spreading of knowledge through books.

7. (81 : 11): This may refer to the end of the universe when it collapses and gets concentrated in a very small space, as if the superficial cover is removed. It may also refer to our present knowledge of astronomy and cosmology which has removed the cover from our earlier ignorance of the sky.

8. (81 : 15-16): Verses 15 and 16 may refer to comets or black holes, which withdraw by contraction, attract rapidly whatever comes near them, but are themselves hidden because they are invisible.

CHAPTER - 82

1. (82 : 1) also (81 : 11) (84 : 1) This may refer to collapsing universe.

CHAPTER - 91

1. (91 : 8): Two men of the tribe of Mwzaina came to Allah's messenger and asked "O messenger of Allah! What is your opinion about what the people do in the world and strive for, is something decreed for them (by destiny), something preordained for them; or will their fate in the hereafter be determined by the fact that their prophets brought them teachings which they did not act upon and thus became

deserving of punishment?" Thereupon he said, "Of course it happens as it is decreed by destiny and preordained for them and this view is confirmed by the verse of the book of Allah, the Exalted, the Glorious," and he recited the above verse nos. 7 and 8 of Ch. 91 (Sahih Muslim, Hamid Siddiqui vol. IV page 1395).

2. (91 : 9-10): Verse 8 hints at predestination while verses 9 and 10 indicate that man is free to develop or destroy his 'self'. This hints at free will, the power of decision given to man. This balance is probably spoken of in verse 7. "And the soul and He Who balanced it". Destiny as the cause and free will as the effect appear to be simultaneous and in equilibrium. Man, unaware of his destiny, is accountable for his decisions.

CHAPTER - 93

1. (93 ; 3): After the first revelation of the Quran (96 : 1-5) there was a gap in further revelation which made the infidels remark that Muhammed's (PBH) Fosterer had bidden him farewell. This Surah was sent down in reply to this remark of the infidels.

CHAPTER - 96

1. (96 : 1-5); These five verses of the Quran are reported to be the first revelation of the Quran to Prophet Muhammed (PBH) on the Night of Al Qadr in the month of Ramazan at the cave of Hira in Mecca.

2. (96 ; 2): According to Maurice Bucaille, the author of the book "The Bible the Quran and Science", American Trust publication USA 1979' page 204: "In the process of the birth of a child, the female egg fertilized by the male sperm, literally clings to the uterus like roots in the soil drawing nourishment for its growth. 'Alaqa' is this 'something that clings' ! Man has never passed a stage of being a blood clot." Arabic dictionaries too give the meanings of Alaqa as hanging one, suspended, attached and leech which is a blood sucking worm. Maurice Baucille further remarks. Page 205: "The Quranic description of certain stages in the development of the embyro corresponds exactly to what we today know about it, and the Quran does not contain a single statement that is open to criticism for modem science." In view of this the word Alaqa has been translated as 'that which clings and hangs like a leech'.

(96 : 5): Verses I to 5 are the first revelation of the Quran and in the very first revelation, mention of reading, pen and teaching should make one realize the importance of knowledge in Islam.

CHAPTER – 97

1. (97 : 4): A work normally involves inspiration for initiating and planning it, and energies to execute it. Does this verse convey the sense that every year during this night, inspiration and energies required for every affair of the year are sent down by the order of Allah through Jibraeel and the angels?

CHAPTER - 100

1. (100 : 1-5): According to many commentators verses 1 to 5 refer to war horses. Could they also refer to rockets, missiles, bombs etc. which involve fire, dust, sound, penetration of space etc.

CHAPTER -102

1.(102 : 6): Does this refer to our modern scientific knowledge of the very high temperatures, running in millions of degrees centigrade, encountered in stars, pulsar, quasars, black holes etc?

CHAPTER - 105

1. (105: 1); This chapter refers to the attempted attack on Kaaba by Abraha, (the Christian Viceroy of Yemen, in the year of birth of our Prophet. Abraha had one/or more elephants in the army, \so the title.

CHAPTER - 108

1. (108: 3): Enemies of the messenger Allah (PHB) used to taunt that he has no posterity, because of the early deaths of his sons. This surah comforts him assuring abundance of good and loss to his enemies.

CHAPTER - 110

1. (110: 3): This is the last chapter revealed during the farewell pilgrimage of the messenger of Allah at Mecca. The last verse revealed is the 3rd verse of Chapter 5.

CHAPTER-111

1. (111: 5) Abu Lahab, whose actual name was Abdul Uzza, was a bitter enemy of the Prophet (PBH) inspite of being his uncle. When the Prophet (PHB) had called his near relatives to address them for inviting them to follow Islam, Abu Lahab is reported to have cried out, "May you perish, have you called us for this?" Abu Lahab's wife Umm Jameel used to place thorns and sharp sticks in Prophet's (PBH) path. Surah No. 111 is a curse against this couple.