UNIT4 NEUROTHEOLOGY: PHILOSOPHICAL IMPLICATIONS

Contents

- 4.0 Objectives
- 4.1 Introduction
- 4.2 Meaning and Significance
- 4.3 The Power of Human Mind
- 4.4 Vision and Dreams
- 4.5 Neurotheology and Religious Experience
- 4.6 "Wholly Other" and the "Absolute Unitary Being"
- 4.7 Let Us Sum Up
- 4.8 Key Words
- 4.9 Further Readings and References

4.0 **OBJECTIVES**

- To introduce the students to the basics of neurotheology
- To give some ideas of the relationship between nurological studies and religious experiences.
- To understand some aspects of mystical experience through neurology.

4.1 INTRODUCTION

Pascal Boyer is a professor at Washington University in St Louis, a pre-eminent scholar of religious behaviour in humans and the author of *Religion Explained: The Evolutionary Origins of Religious Thought*. Boyer is an atheist and proposes that religions exist because their proponents have learnt to successfully recruit a variety of low-level systems in the human brain. He views religions not as a source of morality but as a canvas on which people project their own folk ethics. However, Boyer seems to miss the concept of neurotheology. The brain after millions of years of evolution has developed the capability to conceptualize religious thoughts and feelings. Anthropologically why did the human species evolve this capability? Boyer is critical of neuroimaging for religious purposes. Still he acknowledges, "that people can experience a sudden feeling of peace, of communion with the entire world.... (that) can be to some extent correlated with particular brain activity; it is plausible that such experience stems from a particular activation of cortical areas that handle thoughts about other people's thoughts and those that create emotional responses to people's prescience" (Jacob 2006).

What Boyer has stated above is exactly what neurotheologians are trying to find out. He misses the point that the brain's capacity to conceptualize religious tenets can be insinuated in all equations of brain evolution. The anthropological changes that occurred during evolution influenced the very nature of society, environment and human awareness of God, and their openness to religious an mystical experiences.

4.2 MEANING AND SIGNIFICANCE

Neurotheology, also known as spiritual neuroscience, is the study of correlations of neural phenomena with subjective experiences of spirituality and hypotheses to explain these phenomena using neurological terms. Neurotheology in other words is primarily concerned with identifying the mechanisms underlying brain functions leading to the conceptualization of God, moral values, spiritual experience, guilt, faith and transcendental longings that have become an integral part of human personality. It does not address the subject of experience, beliefs, inner promptings that may belong to another dimension of reality, are also necessarily brain based. Aldous Huxley used the term neurotheology for the first time in the utopian novel Island. The discipline studies the cognitive neuroscience of religious experience and spirituality. The term is also sometimes used in a less scientific context or a philosophical context. Some of these uses, according to the mainstream scientific community, qualify as pseudoscience. Huxley used it mainly in a philosophical context. "Only one or two thousand nerve fibers connect the brain to the hundred million nerve cells in the small intestine. Those hundred million nerve cells are quite capable of carrying on nicely, even when every one of their connections with the brain is severed..."

In fact, the word Neurotheology at first glance would seem to combine neurological science (which explains the mechanics or the HOW of brain phenomena) with religious doctrine (which explains the WHY behind our life experiences and brain functions). Neurotheology is in fact primarily concerned with the mechanisms underlying brain functions like the conceptualization of God, moral codes, spiritual experiences, guilt, faith and transcendental longings that are an integral part of the human personality. It does not address the subject of theology except to acknowledge that mystic experiences, inner promptings and other phenomena dealing with another dimension of reality are necessarily brain based. It is important for scientists and theologians alike to understand HOW the brain works in a particular phenomenon and WHY it works in that particular pattern.

Thus Neurotheology, still in its infancy promises to fill a very important hiatus in our understanding of things transcendental. The term Neurotheology has been in use for at least 15 or more years. The discipline came into being because tremendous innovations in the mapping of brain fuctions (like fMRI – Functional Magnetic Resonance Imaging and related techniques) created an explosion in the knowledge of how the brain works. These new techniques have been used to map changes in specific regions of the brain during deep meditation, drug consumption, the telling of falsehoods, track action in the brain of serial killers who show no remorse and study brain injured patients who suddenly exhibit abnormal or nonethical behaviour. Neurological science has become a tool readily available for analyzing the reductionist aspects of transcendental happenings (Abraham 2006).

4.3 THE POWER OF HUMAN MIND

A group of neuroscientists have identified a region of the human brain that has some connection to thoughts of spiritual matters and prayer. Their findings tentatively tell that we as a species are genetically programmed to believe in

God. However these studies do not in any way negate the validity of religious experience or God rather they just give an explanation in terms of brain regions that may be involved. What is really important is that the only manifestation of God that the human mind can respond to in a coherent ways is God's love, because we are unable to relate or understand a spirit. The mind is what drives us, the spirit is our personality or ego, and the body is the vehicle that is used to experience the physical world. So what we perceive as reality is only a canvas waiting for us to draw upon it any picture we want .Anything is possible with us. As Buddha, holds: "We are what we think. All that we are arises with our thoughts. With our thoughts we make the world." Even at this neurological age, his insight is valid. It is by making using this very mind that humans have visions of God and neurologist try to explain it.

Check Your Progress I						
Not	Note: Use the space provided for your answers.s.					
1)	What do you understand by "Neurotheology"?					
2)	In the light of neurotheology comment on Buddha's insight: "We are what we think. All that we are arises with our thoughts. With our thoughts we make the world."					

4.4 VISION & DREAMS

A mystical vision is more profound that ordinary seeing. Throughout the centuries, mystics, prophets, and ordinary people from all religions have experienced visions from their deities or higher levels of consciousness that have informed them, warned them, or enlightened them. From Genesis to Revelation, God uses visions and dreams as a principal means of communicating with his prophets and his people. For example, in Numbers 12:6, God declares, "If there is a prophet among you, I the Lord make Myself known to him in a vision and speak to him in a dream." And in Joel 2:28: "And it shall come to pass afterward that I shall pour out my spirit upon flesh; and your sons and your daughters shall prophesy, your old men shall dream dreams, your young men shall see visions."

Roman Catholics holds that there are two kinds of visions. One is the imaginative vision, in which the object seen is but a mental concept of symbol, such as Jacob's ladder leading up to heaven. For example, St. Teresa of Avila (151–1582) had

numerous visions including images of Christ. The other is the corporeal vision, in which the figure seen is externally present. Along with visions, dreams are also connected to our inner world. Priests and prophets as well as the common people, often experienced God as well as animal spirits and the souls of the dead, during the course of a dream. Dreams occur only in sleep. So it is pertinent of us to review some of the current views on the nature of sleep. There are two types of sleep- REM (Rapid Eye Movement) Sleep and NREM (Non rapid Eye Movement) sleep. These nomenclatures are based on the simple observation that during REM sleep the eyeballs move rapidly and continuously beneath the closed eyelids. Sleep, new information is processed and stored in the memory banks. REM sleep plays a role in problem solving, memory consolidation, information processing and creativity (Abrahm 2006).

Vision recorded in the Bible, are the result of activation of the neural circuits in a very organized sequential manner. Most visions occur as the result of deep concentration. However the brain-mind ability to interpret impulses that have by-passed the five senses is the key to most spiritual experiences. We might, therefore, think of God as a non-local reality, not only permeating the cosmos but also communicating with the individual man. Einstein talked of "a knowledge of the existence of something we cannot penetrate, our perception of the profoundest reason and the most radiant beauty." It is this knowledge and emotion that constitutes true religiosity. Are dreams, visions meditation just purposeless phenomena? Why does a sense of holiness permeate some of these encounters? We need to recognize that in these encounters God impinges the; Brian, and a deep spiritual awareness is created as "Spirit speaks to spirit". Everyone should realize as Moses did on the mountain of Horeb that we perhaps are on holy ground and in the presence of God, in these spiritual encounters (Abraham 2006).

4.5 NEUROTHEOLOGY AND RELIGIOUS EXPERIENCE

In the year 1844, long before the establishment of neuroscience as a separate field of investigation and study, Orson Flower wrote, "This science shows ... that a large section of the brain is set apart exclusively for the exercise of the moral and religious feeling." Now with the introduction of the most sophisticated imaging machines and new evolutionary insights into the brain organization, neuroscientists are confident of mapping the 'God Spot' in the brain. Brain, although, it has come under the scanner of scientists over the recent years, its mysterious nature still remains intact. Eelectroencephalography (EEG) is used to measure the electrical activity in the brain. EEG is commonly used because of it is relatively noninvasive and produces images with very good temporal resolution. Functional neuroimaging studies of religious and spiritual phenomena have utilized positron emission tomography (PET), single photon emission computed tomography (SPECT), and functional magnetic resonance imaging (fMRI). In general, such techniques can measure functional changes in the brain in pathological conditions, in response to pharmacological interventions, and during various activation states.

Spirituality is the heritage of all humankind and a function for our brain-mind construct. In fact, it is the result of millions of years of biological evolution. It is true to say that my mystical journey that commenced with the Big Bang and the birth of life is ongoing even now. The mystic experience of oneness and dependent communion with the spiritual is actualized in finite conscious experience and thus brain has a significant role to play there.

There are some basic structural and functional patterns that essential for the mystical experience. Some of brain parts involved are:

- A highly developed complex brain and mind connections.
- During the mystic experience some areas of the Brain are metabolically more active than others, although the Brain works as a whole.
- The pre-frontal neuronal connections especially the right orbital and medical surfaces
- The temporal lobes and parts of the parietal lobes
- The limbic system
- The rest of the brain acting in coordination

Every mystical experience is a highly individual experience and the mystic is never able to express and interpret it for others as he actually experienced it. The mystic experience may take myriad forms because extensive areas of the right brain are involved in its manifestations. It is important to differentiate between hallucinations and mystic experiences though the brain areas involved may be identical in both phenomena. Mystic experiences may originate in the brain from energies impinging on the cortex from other dimensions .Hallucinations are initiated exclusively by focal cortical neuronal activation. Hallucinations may occur secondary to brain lesions in any part of the cortex or due to high fever, drugs, starvation etc. Basically hallucinations occur due to loss of sensory input like vison and hearing.

St. Teresa of Avila (1515- 1582), considered one of the greatest mystic saints of Christendom described her mystic experience as follows: "I threw myself down in despair before an image of the Mother of God. With many tears, I implored the Holy Virgin to become my mother now. Uttered with the simplicity of a child, this prayer was heard. From that hour on, I never prayed to the Virgin in vain." Therefore it is amazing to say that St Teresa Avila was one of the great Christian mystics. Overcoming physical ailments, she became fully absorbed in her devoted to God. In Spain, Teresa of Avila offered to the world something profoundly mystical. Her mystical experience is the most successful culmination of the divine marriage between the aspiring soul and the liberating Christ, and it is here that man's helpless crying will and God's omnipotent all-fulfilling will embrace each other.

a) Limbic System Hyper-activation Theory of Religious Experience

The main proponents of this neurobiological theory of religious experience are R. Joseph and Vilayanur Ramachandran. Their main contention is that religious experience is nothing but the activation of the limbic-amygdalial region of the human brain. These neuroscientists link the universality of religious experience to the fact that every human being has a limbic system. R. Joseph writes: The

limbic system is common to all peoples; this might explain why belief in souls, spirits, haunted houses, angels or demons, and the capacity to have mystical experiences, including the sensation of being possessed by gods or devils or hearing their voices, is worldwide."

That the limbic system is the seat of a number of activities inspires these types of neuroscientists to link all those activities to religious experience. It is commonly believed and is a scientifically proved fact that the limbic system has been the seat of sexual pleasure, and emotions such as violence, fear etc.; whose hyper activation may also lead to hallucination. R. Joseph writes: "Perhaps it is because activation of limbic system generates spiritual and religious, as well as fearful and enraged, murderous feelings that so many of those who claim to be religious, including members of innumerable religious sects, become "righteous" belligerent, hateful, and murderous. Indeed throughout the recorded history, cults and organized religious have employed torture and human or animal sacrifice and have sanctioned if not encouraged the murder of non-believers, what could be referred to us limbic system blood lust" (Joseph 2001).

He continues to write (Joseph 2001): "Sex and food (along with fear, rage and aggression) are probably the most powerful of all limbic emotions and motivators and when harnessed or stimulated they can completely overwhelm or control the brain and lead to limbic hyperactivation coupled with religious or spiritual sensation, or at a minimum, complex dreams or hallucinations. Hence, hungry men will dream of food, and those who are sexually aroused will dream sex. A parched and starving man however, will not just dream, he will hallucinate food and water and will attempt to slake his desires by consuming a hallucination."

Another important aspect of this kind of neurobiological explanation of religious experience is that religious experiences could be relegated to the level of a pathological state, especially with the temporal lobe epilepsy. The fact that many epileptic patients do exhibit signs of religious hallucinations and experiences of religious fervour leads these types of neuroscientists to make the bizarre conclusion that those religious experiences are pathological. Joseph writes (Joseph 2001): "Many modern-day religious writers who also happen to suffer from epilepsy are in fact exceedingly prolific, whereas conversely, those who feel impelled to preach tend to do just that. In part this is a consequence of amygdala activation of Wernicke's area, the adjacent inferior parietal lobe, and Broco's area, which give rise to "voices", or strange thoughts, and/or a desire to speak."

R. Joseph argues that Moses and St. Paul, the two epitomes of Christian religious fervor in the Bible, one in the Old Testament and the other in the New Testament, might have had such epileptic seizures, which brought them to the brim of the arduous religious fervour which they exhibited in life; Moses in the freedom struggle of his own people and Paul in the evangelisation of the Gospel of Jesus respectively after their 'visions.' R. Joseph writes in the following vein (Joseph 2001): "If Moses subsequently (after the exposure to the scorching sun in the desert) developed temporal lobe epilepsy, this could explain his hyperreligious fervor, his rages, and the numerous murders he committed or ordered. Similarly his speech impediment, hypergraphia, and hallucinations, such as hearing the voice of God are not uncommonly associated with temporal lobe seizures and limbic hyperactivation."

b) The Triune Brain and the God-Talk

The main proponents of this theory of religious experience in neuroscience are neuroscientists Paul D. MacLean and James B. Ashbrook and Carol C. Albright (See Rottschaefer 1999). The latter two authors take the basic idea of the triune brain from the former, who, largely depending on evolutionary theories, claims that our human brain has three main parts corresponding to the three main evolutionary stages of development (Ashbrook 1989).

According to MacLean the first level of human brain organization is the reptilian Brain – whose main anatomic structure is the brain-stem. MacLean calls this the primal mind, as this is the first type of mind in the evolutionary development. The main function of this part of the brain is "life support" and "self-protection" (Ashbrook and Rausch 1997). The basic characteristic of life support is the phenomenon called 'my-turf' in which each organism finds its own place of settlement. Ashbrook writes, "The primal mind is literally territorial-my place my prerogative, my space, my inherited niche in the scheme of things" (Ashbrook 1989). Taking these anatomical insights of the reptilian brain, Ashbrook and Albright connect it to religion showing it as the biological base for the linguistic expression of territoriality in religion (Ashbrook and Rausch 1997). He writes in another article, "Such expressions may point to geographical territory such as the biblical concept of a Holy Land for the people of the Lord. They also may be psychological and theological analogical of territory based on the primal mind of the reptilian like brain" (Ashbrook 1989).

The second level of brain organization is the limbic system which MacLean calls the 'emotional mind'. This region according to MacLean plays a significant role in the nurturing, motivation, and preservation of continuity of species and familial bonds (Ashbrook 1989). This part's role in the symbolic expression is also emphasised. Ashbrook and Albright hold that this region is responsible for the picturing of a God who is nurturing, preserving humankind and saving them from slavery (Ashbrook 1989).

Neo-cortex, the new brain, is considered as the rational mind of the primates, especially in humans. Neo-cortex with its two hemispheres having two contrasting features - the right involved in more integrative processes and the left more analytical processes - makes human distinctiveness by assisting in the making of culture and science. However Ashbrook and Albright suggest in their book that both these hemispheres, though possessing contrasting features, act with a greater degree of cognitive integration through the help of the corpuscallosum. These hemispheric distinctions and the resultant integration, according to Ashbrook and Albright, represent different images of God. Regarding left-brain analogy of brain with God, they write, "It seems clear that the left brain that can begin to grasp the work of a creator of such surpassing reasonableness must, indeed, reflect one of the images of God." (Ashbrook and Rausch 1997) On the right brain they write, "Our human right brain, which comprehends all together, may, in a feeble sort of way, provide an image of this encompassing God who is manifested in the whole of reality." (Ashbrook and Rausch 1997) On the integration they write, "Surely God cannot be limited to one or another way of being God. ... The conclusion is that God the mother/father/lover/ground of Being has cunningly designed the world, and supports its interactions and its inhabitants by perceiving and penetrating it whole." (Ashbrook and Rausch 1997).

Check Your Progress II					
Not	te: Use the space provided for your answers.s.				
1)	Why is limbic system hyper-activation theory of religious experience?				
2)	What is the rational mind of the primates and its significance?				

c) The Biological Tendency to Transcendence: The Neurobiology of Mystical Experience

Andrew Newberg, Eugene D'Aquili, Victor Turner and Colwyn Tevarthen are the main proponents of this theory of religious experience in which they argue that the potency to transcend the material existence of this world to the immateriality of the mystical experience is a built-in mechanism of the human brain which has evolved. "After years of scientific study, and careful consideration of our results, Gene and I ... saw evidence of a neurological process that has evolved to allow us humans to transcend material existence and acknowledge and connect with a deeper, more spiritual part of ourselves perceived of as an absolute, universal reality that connects us to all that is" (Newberg, D'Aquili and Rause 2001). The proponents of this theory further try to show this by demonstrating that there is a biological drive to make myths and rituals, which will lead to transcendental experiences.

The proponents of this theory do this by dividing the brain into six operators of which the holistic operator is the one intimately related to the religious transcendental experiences. Situating at the right hemisphere of the brain this holistic operator helps to explain the mystical experiences which transcend temporal and spatial limitations (Barbour 1998). Eugene G. d'Aquili writes, "In certain rare cases, often induced by meditation, ritual behaviour, starvation, hypoxia, prolonged sensory deprivation, or various drug effects, the holistic operator can function as if it were on its own, independent of content upon which to impose wholeness. In these rare states of absolute function the operator generates simply the sensation of wholeness itself devoid of any specific content." (A'quili and Newberg1993).

4.6 "WHOLLY OTHER" AND THE "ABSOLUTE UNITARY BEING"

In mystical experiences as well as religious practices two commonly occurring notions regarding God or the Absolute are "Wholly Other" and "Absolute Unitary

Being." he phrase 'wholly other' refers to the experience of divine as somebody who is transcendent, high above the heavens. Religious experiences, in this tradition, refer to the religious experience of the divine as the mysterious 'other.' Neuroscientific explanation of this type of experiencing God as the totally other or the mysterious other revolves around the process of deafferentation of those neural circuits within the inferior parietal lobule which generate the sense of causality in our ordinary processing of sensory input, and which we have termed in previous works the causal operator (A'quili and Newberg1993). This process of cutting of the passage of the neuronal activities would generate a kind of 'reified causality' – the great cause: the mysterious other.

The absolute unitary being is the form of mystical experience where the practitioner experiences an obliteration of the self-other dichotomy. She feels totally one with such a being, thereby giving up her own identity. It is believed that posterior superior parietal lobe is responsible for the sense of space and the distinction of subject and object in our normal perception. While the total deafferentation of the left PSPL results in the obliteration of the self-other dichotomy the deafferentation of the right PSPL generates a sense of absolute transcendent wholeness. Though it the inputs to this area is cut-off, neuronal impulses can shoot out of PSPL, and pass to hippocampi and to the limbic structures which are responsible for the emotions of happiness and joy. Thus the practitioner would experience deep sense of quiescence coupled with ecstasy, hus some of the salient features of mystical and religious experiences can be better understood through neurotheology.

Check Your Progress III					
Not	Note: Use the space provided for your answers.s.				
1)	How do you relate the biological tendency to transcendence with neurotheology?				
2)	What is the importance of "Absolute Unitary Being" in mystical experiences?				

4.7 LET US SUM UP

After having given a brief introduction to neurotheology, we have tried to understand and interpret visions and dreams. Then we saw how neurotheology can explain religious experiences. Finally we came to relate God ("Wholly Other"

or "The Absolute Unitary Being") in terms of neurotheology. Ours is just the beginning of a long research that will be carried out further in the next decades.

4.8 KEY WORDS

Deafferentation: The elimination or interruption of sensory nerve fibers. Such destruction of the afferent connections of nerve cells, performed esp. in animal experiments, to study the effect on brain.

Eelectroencephalography: The measurement of electrical activity in different parts of the brain and the recording of such activity as a visual trace (on paper or on an oscilloscope screen. Abbr. EEG

Functional magnetic resonance imaging (fMRI): Functional magnetic resonance imaging, or fMRI, is a technique for measuring brain activity. It works by detecting the changes in blood oxygenation and flow that occur in response to neural activity – when a brain area is more active it consumes more oxygen and to meet this increased demand blood flow increases to the active area. fMRI can be used to produce activation maps showing which parts of the brain are involved in a particular mental process.

NREM sleep: A recurring sleep state during which rapid eye movements do not occur and dreaming does not occur; accounts for about 75% of normal time of sleep.

Positron emission tomography (PET): using a computerized radiographic technique to examine the metabolic activity in various tissues (especially in the brain).

Single photon emission computed tomography (SPECT): Single photon emission computed tomography (SPECT, or less commonly, SPET) is a nuclear medicine tomographic imaging technique using gamma rays. It is very similar to conventional nuclear medicine planar imaging using a gamma camera. It is able to provide true 3D information.

4.9 FURTHER READINGS AND REFERENCES

Abraham, Jacob. Essays in Neurotheology. NOIDA: Academy Press, 2006.

Albright, Carol Rausch, and James B. Ashbrook. *Where God Lives in the Human Brain*. Naperville, Ill.: Sourcebooks, 2001.

Al-Chalabi A, Turner MR, Delamont RS. *The Brain: A Beginner's Guide*. Oxford:Oneworld, 2006.

Ashbrook, James B., and Carol Rausch Albright. *The Humanizing Brain: Where Religion and Neuroscience Meet.* Cleveland, Ohio: Pilgrim Press, 1997. Print.

B.Chethimattam, John. Consciousness and Reality, *An Indian Approach to Metaphysics*, Bangalore: The Bangalore Press, 1967.

Barbour, Ian G. *Religion and Science: Historical and Contemporary Issues*, New York: SCM Press Ltd, 1998.

Christen Y, Churchland PS. *Neurophilosophy and Alzheimer's Disease*. Berlin: Springer-Verlag, 1992.

Eugene G. A'quili and Andrew B. Newberg. "Religious And Mystical States: A Neuropsychological Model", *Zygon*, vol. 28, no. 2 (June 1993), 195.

Gellatly, Angus and Zarate, Oscar. *Mind and Brain*, Victoria: McPherson's Printing Group, 1998

James B. Ashbrook, "The whole Brain as the Basis for the Analogical Expression of God," *Zygon* 24, no. 1 (March 1989), 70.

Joseph LeDoux, Jacek Debiec, Henry Moss. *The Self-From soul to Brain*. New York Academy of Science, 2003.

Joseph, R. "The Limbic System and the Soul: Evolution and the Neuroanatomy of Religious Experience," *Zygon* 36, no. 1 (March 2001).

Newberg AB, D'Aquili EG, Rause V. Why God Won't Go Away: Brain Science and the Biology of Belief. New York: Ballantine Books, 2001.

Newberg AB, Waldman MR. Born to Believe: God, Science, and the Origin of Ordinary and Extraordinary Beliefs. New York: Free Press, 2007.

Newberg AB, Waldman MR (2009) *How God Changes Your Brain : Breakthrough Findings from a Leading Neuroscientist*. Ballantine Books, New York.

Radcliffe, Mathew. "Scientific Naturalism and the Neurobiology of Religious Experience," *Religious Studies*, 39, no. 3 (September 2003), 323-345.

Rottschaefer, William A. "The Image of God of Neruotheology: Reflections of Culturally Based Religious Commitments or Evolutionarily Based Neuroscientific Theories?," *Zygon* 34, no.1, (March 1999), 60-63.

Searle JR. *The Rediscovery of the Mind*. Cambridge: MIT Press, 1992.

Searle JR. Mind: A Brief Introduction. Oxford: Oxford University Press, 2004.



	Stud	ent Satisfac	ction	Surve	ey		
	Stude	ent Satisfaction Survey	of IGNOU	J Students	•		
Enro	llment No.						
Mob	ile No.						
Nam							
Prog	ramme of Study						
Year of Enrolment							
\mathcal{E}		31-40	□41-50 □	\square 51 and	above		
Gender		☐ Male ☐ Fema	le				
	onal Centre						
State							
Stud	y Center Code						
Sl. No.	Please indicate how much you are satisfied or d		issatisfied Very Satisfied	with the fo	ollowing s	Dissati- sfied	Very Dissati- sfied
1.	Concepts are clearly explained in the printed learning material						
2.	The learning materials were received in time						
3.	Supplementary study materials (like video/audio) available						
4.	Academic counselors explain the concepts clearly						
5.	The counseling sessions were interactive						
6.	Changes in the counseling schedule were communicated to you on time						
7.	Examination procedures were clearly given to you						
8.	Personnel in the study centers are helpful						
9.	Academic counseling sessions are well organized						
10.	Studying the programme/course provide the knowledge of the subject						
11.	Assignments are returned in time						
12.	Feedbacks on the assignments helped in clarifying the concepts						
13.	Project proposals are clearly marked and discussed						
14.	Results and grade card of the examination were provided on time						
15.	Overall, I am satisfied with the pro	ogramme					
16.	Guidance from the programme confrom the school	ordinator and teachers					

After filling this questionnaires send it to: Programme Coordinator, 115, G Block, IGNOU, Maidan Garhi, New Delhi-110068

IGNOU-STRIDE © All rights reserved 2009, ACIIL