FIRST TERM EXAMINATION [FEB. 2018]
EIGHTH SEMESTER [B.TECH]
HUMAN VALUES AND PROFESSIONAL ETHICS–II
[ETHS–402]

Time : 1½ hrs. M.M. : 30

Note: *Q. No. 1 is Compulsory. Attempt any two more questions from the rest.*

Q.1. Write any two short notes:

Q.1. (a) Effects of Social Media on Values. (5)

Ans. Social media are set of tools for people to exchange information, audio and video contents and disseminate different ideas in a virtual community. On the other hand the term ethics is defined as "the ability to define and differentiate between what is right and what is wrong". The way social media is being used these days brings lots of side effects with it, the most important been on the human ethics. Researches have established a strong correlation between the social media and the growing impact it us on the people who use this medium. The term privacy and ethics does not come very often in place since the internet is considered as a completely free market place and there are specific rules and regulations regarding the publicity of any information. That is why crimes like cyber bullying, Hacking, Privacy infringements, electronic thefts and personal defamation has been on the rise from the last 5 to 10 years. This situation is so threatening that governments are spending billions of dollars just to control the flow of information on the social media. Whenever this will happen, one this is for sure that till that time, we will see people behavior being changed to a new side significantly.

Our daily routine is consumed so much by the social media that we simply cannot live without it anymore. Roughly, an ordinary professional uses the social media for one or more of the following four broad categories i.e. to build your social circle, to obtain new information, to spread some information and knowledge and to expand business. Ethical issues related with the social media.

The impact of social media on our life has been very mixed, with ranging from good and bad effect working side by side. But the focus here will be the impact of social media on our ethical issues. Effects like cyber bullying, privacy issues, social injustice and ignorance, effects on family values and lack of pure judgments are some of them.

Q.1. (b) Indian Pluralism the way of life. (5)

Ans. India offers a unique plurality of traditions. Among these the Brahminical concept of *dharma* which describes the duties of the individual has often been regarded as dominant because many rights merely follow from these duties. It is a basic question whether modern concepts of human rights interfere with traditional notions of dharma, because in the law books of the *Dharmashastras*, there is no equality before law or equal protection of law, since society has been arranged through a rigid system of social hierarchy based on caste. By its very nature, the caste system goes against respect for an individual's dignity. It has been called the 'duty-first value system of Indian culture' and reflects some of the principal differences between the political traditions of India and Europe. Unlike in Europe, man and society in India have been perceived as antagonistic to each other, while in western political philosophy the triangle of 'individual-society-state' functions as the key to the explanation of major developments.

However, as several studies on caste among the Indian Muslims have shown, while the influence of Hindu social norms on the Muslims might partially explain the continued existence of caste among them, it does not fully explain how the Muslims of the region came to be stratified on the basis of caste in the first place. It also ignores the role of sections of the *ulama*, scholars of Islamic jurisprudence, in providing religious legitimacy to caste with the help of the concept of *kafa'a*.

The caste system was described in the *Rig Veda*, an ancient Brahamical text, as a social order intended to maintain harmony in society. It divides people into four main *varnas*, but there also are those outside the system, the "untouchables" (*Avarnas*). Though discrimination based on caste has been outlawed since India's constitution was adopted in 1950, the practice still pervades society.

Caste, which was a matter of vital importance to the Vedic Brahmins of India, was one of utter indifferences to the Buddha, who strongly condemned the debasing caste system. In his Order of Monks all castes unite as do the rivers in the sea. They lose their former names, castes, and clans, and become known as members of one community, the *Sangha*.

Like a lot of other countries in the world at the turn of the century, India seems to be confronted with a double challenge. From the outside it is the multifarious and multidimensional process called globalization; from within we witness developments of disintegration called ethno-nationalism or religious fundamentalism. Both are interlinked, both tend to have a wide range of implications, and both might undermine the traditional concept of the nation-state. During the last decade, crises symptoms in India have multiplied. Many social (particularly caste) and religious conflicts present a threat to secularism and democracy. Thus, many questions about India's political identity have to be posed or reformulated again and possible new answers have to be considered. Since a dialogue by its very nature has to be an open-ended process, it was not expected that the contributions to be discussed at the workshop should consider all relevant aspects of or come up with answers in a strong logical sequence. Instead, the idea was that they should be able to raise questions that have specific political consequences and social implications and indicate possible directions along which answers could be found. Such eclecticism, a necessary part of a dialogic process, has been responsible for a degree of tentativeness regarding both the concepts used and the conclusions pressed in the analyses.

Q.1. (c) Engineer's responsibility while designing any machine. (5)

Ans. Engineer's have great ethical and moral responsibilities while designing a machine.The engineers recognize that the greatest merit is the work and exercise their profession committed to serving society, attending to the welfare and progress of the majority. By transforming nature for the benefit of mankind, engineers must increase their awareness of the world as the abode of humanity, their interest in the universe as a guarantee of overcoming their spirit, and knowledge of reality to make the world fairer and happier. The engineer should reject any paper that is intended to harm the general interest, thus avoiding a situation that might be hazardous or threatening to the environment, life, health, or other rights of human beings. It is an inescapable duty of the engineer to uphold the prestige of the profession, to ensure its proper discharge, and to maintain a professional demeanor rooted in ability, honesty, fortitude, temperance, magnanimity, modesty, honesty, and justice; with the consciousness of individual well being subordinate to the social good. The engineers and their employers must ensure the continuous improvement of their knowledge, particularly of their profession, disseminate their knowledge, share their experience, provide opportunities for education and training of workers, provide recognition, moral and material support to the school where they studied, thus returning the benefits and opportunities they and the employers have received. It is the responsibility of the engineers to carry out their work efficiently and to support the law. In particular, they must ensure compliance with the standards of worker protection as provided by the law. As professionals, the engineers are expected to commit themselves to high standards of conduct (NSPE).

Q.2. Describe the Accident of Bhopal Gas Plant. What measures should be taken to avoid such huge tragedy in future? (10)

Ans. Thirty years ago, toxic gas leaking from Union Carbide's factory in Bhopal claimed more than 5,000 lives and exposed more than half a million people to harmful toxins. The negligence and human tragedy made Bhopal synonymous with industrial disaster and showed just how harmful chemical pollution is to health and well-being. The enormous human loss calls for remembering the victims and stronger engagement on a wide range of pollution management and environmental health issues to prevent similar tragedies.

A chemical gas spilled from a pesticide factory owned by Union Carbide. More than 40 tons of gas created a dense cloud over more than half a million people and killed thousands. None of the six safety systems at the plant worked to prevent the disaster. The company's own documents prove the plant was designed with "untested" technology, and that it cut corners on safety and maintenance in order to save money.

Today, clean-up of the site is still pending, those who survived the disaster don't have alternate livelihood opportunities and victims are still suffering.

The company abandoned the factory site without cleaning and restoring it to its original state. The contaminated land has not been cleaned up and families too poor to move continue to live there. The livelihoods of more than 30,000 people are affected.

More than 20,000 people still live in the vicinity of the factory and are exposed to toxic chemicals through groundwater and soil contamination. Health risks and illnesses including cancer, birth defects, fevers, broils, headaches, nausea, lack of appetite, dizziness, and constant exhaustion continue to plague a new generation. Tests published in 2002 reported dangerous toxins in the breast milk of nursing women living near the factory.

Recent reports confirm that the contamination is not diminishing with time. Water from a hand pump in Atal Ayub Nagar, already lethal by 1999, has become seven times more toxic since then. The rate of birth defects in the contaminated areas is ten times higher than in the rest of India.

In 2001, Dow Chemical purchased Union Carbide. The governments of India and the state of Madhya Pradesh are continuing the court battle with the company to accept environmental liabilities through the purchase.

Preventing Environmental Disasters

While natural disasters are largely unpredictable, environmental disasters are caused directly or indirectly by human behavior. Chemical disasters, like the one in Bhopal, are preventable if risks are identified and addressed early on.

It will take the combined effort of competent authorities, private sector and society to prevent tragic environmental events from happening. Some measures include: Developing policies to ensure that industries operate in accordance with technical and safety standards and allocating resources for risk assessment and monitoring. Most of all, it's important to adhere to environmental norms. Taking environmental safety and public health risks seriously, and promoting do-no-harm industrial development can make a big difference.

There is a clear need to promote clean development that innovatively addresses potential negative impacts on the environment. To prevent future environmental disasters, all sectors could also do more to integrate environmental emergency preparedness and response activities into strategies and sustainable development programs. These measures could make a big difference in people's health and well-being, and avoid future tragedies.

The first and foremost step that needs to be taken to prevent a disaster of such a magnitude in the future is that during the signing of the Memorandum of Understanding between the Company and the Government, it should be made clear to the company concerned that incase any mishap occurs then the responsibility will be bared by the company concerned if there is any security lapse on their part and it should also be made clear that incase an incident does occur then the company should pay at least half

of the compensation to the aggrieved people and the govt. with which they signed the memorandum of understanding.

This was clearly violated in the case of the Bhopal Gas Tragedy as the Union Carbide Company paid a meager amount of compensation for the disaster that took place in Bhopal. And the Indian Government's poor bureaucratic management ensured that many people did not get even that small amount of money that they should have got after the Company sent the money to the Govt. The second step that needs to be taken is that the victim should not be asked to provide evidence to get his/her compensation. This means that the tort law should not be used where the victim has to provide evidence for getting compensation.

Clearly this is a problem that people in India have been constantly facing and it is high time we changed this law so that the aggrieved people can get compensation easily and they don't have to face hassle. Infact this point has been raised when in 1986 in the Sriram Industries case where there was an oleum leak in Delhi which led to the death of 1 person, the Supreme Court pronounced a judgment where this point was one of the landmark points in the case. The third step towards ensuring that such an incident doesn't take place again is that if the local people notice and report something untoward happening near the factory site then the Govt. should take this seriously and take necessary action accordingly. This again was violated during the Bhopal Gas Tragedy before this mega disaster took place the locals had reported that they witnessed gas leaks two or three times earlier as well but on a much smaller scale. So clearly, there was a problem in the way the plant was set up and had the govt. taken the local reports seriously the incident could have been avoided but that was not the case. So this brings up the next point connected to this and that is, there should be a clearance certificate issued to the plant before it is started and if the locals report any incident then the plant should be closed down immediately and an investigation should be ordered into pending which the plant will not be opened.

The next point that has to be kept in mind is that when the plant is built at the time the locals should be informed of the escape routes possible in case a disaster does take place and it is here that the role of the newly formed Disaster Management Committee comes into play. They should work together with the company management and then spread awareness regarding the possible escape routes. The last but not the least important point is that there should be some kind of witness protection and that even if there is political or any other kind of pressure from the company then they are not forced to change their point of view leading to the escape of the culprits as happened with many cases including this one.

Hence, there are many crucial lessons to be learnt from this incident and if necessary steps are taken then such a massive catastrophe could be avoided in the future.

Q.3. What are the responsibilities of Engineers? How Engineers help as active tool in the growth of the nation?

Ans. *"The rationale for teaching ethics to engineers and computer scientists is fairly obvious. Their work (developing, designing and implementing technologies) has enormous impact on the world".* Johnson

Discussion of an engineer's inherent interaction with society and societal norms leads naturally to an engineer's responsibility to society. Since the Grinter report engineering education has made significant progress in strengthening the basic sciences in engineering, including mathematics, chemistry, and physics . Recent trends toward increasing discussion of professionalism in the classroom notwithstanding, topics in professional responsibility (as compared to science, engineering sciences, and engineering analysis) have received surprisingly little attention in engineering education over the last several decades . The authors fear that professional responsibility may also have been underemphasized in the practice of engineering. This includes such topics as

- *Safety and Welfare of the Public and of Clients*
- *Professional Ethics*
- *Legal Liabilities of Engineers*
- *Environmental Responsibilities*
- *Quality*
- *Communications*

Each of these topics relates to the interaction of an engineer to others, clients, society, employers, employees, and to the engineering profession. Regarding engineering ethics, Whitbeck argues that engineers should study engineering ethics from the perspective of a moral agent as opposed to a moral judge. *We fully subscribe to this approach not only for teaching engineering ethics, but also for teaching and practicing in other areas of professional responsibility. For engineers, engineering ethics is not a topic separate from engineering, it is part of the essence of engineering as it pertains to the professional responsibilities that the engineer has with society. The results of an NSF sponsored workshop on engineering ethics in the classroom utilized techniques from engineering design methodology to address ethical dimensions of engineering problems, designs, and interactions. One may consider numerous engineering design methodologies which will illustrate the point. Pugh, for example, includes the following elements in the "engineering design core"*

- **Understanding the Market** (problem definition, societal need)
- **Design Specification** (specifying the needs)
- **Concept Design**
- **Detail Design**
- **Manufacture**
- **Sell**

Pugh's methodology focuses on product design, but also has applications in process design and general problem solving. Experienced engineers would not logically delay consideration of economic issues until after completion of detail design. That would not allow the engineer to consider economic and performance tradeoffs that are essential in the overall evaluation of alternative designs to be analyzed in the Concept Design element. It is just as important that engineers first approach ethical, safety, liability, environmental, quality, and communications issues in the first step of the design process, rather than allowing the design to proceed without regard to these issues. This allows engineers to address and analyze each element of the problem from the problem statement to the release of the product or service to the customer. This allows engineers to integrate (naturally) the consideration of ethical and other concerns directly into the design process and to expand the alternative designs to potentially eliminate or reduce problems, rather than simply to react to the problems.

This article started with a quote stating that "the essence of engineering is design." ABET defines design as:

the process of devising a system, component, or process to meet desired needs. It is a decision making process (often iterative), in which the basic sciences and mathematics and engineering sciences are applied to convert resources optimally to meet a stated objective. ... *it is essential to include a variety of realistic constraints, such ... economic factors, safety, reliability, aesthetics, ethics and social impact* (emphasis added)

ABET's definition of design involves engineering activities which include open-ended problems. These activities include machine design, product and process engineering, manufacturing engineering, and applications engineering. This broad definition of design includes most of engineering activities involving societal interaction due to their interactions with society, engineers assume the responsibility inherent in

such interactions. ABET's definition acknowledges the relationship of engineering to society in the recognition of "realistic constraints" in the design process (remember that "design is the essence of engineering").* The National Research Council also recognized the importance of engineering in society. Yet engineers frequently give limited attention to the codes which guide their interaction with society. Skooglund proposes that professional ethics describe "how we agree to relate to one another". This pragmatic definition of professional ethics can be useful in examining how engineers view their codes.

Development of course material in the last decade has allowed engineering degree programs to expand course offerings in fields of professional responsibility. Additionally, faculty have developed problems for analytical courses which include issues of professional responsibility (see Broom and Pierce, "The Heroic Engineer"). Though developments supporting an engineer's ability to address areas of professional responsibility are encouraging, the authors still believe that academic programs currently are producing far too many engineers who do not understand their professional responsibilities to society. Observations by Vandenburg and Khan support these concerns. They state: "Given current economic, social and environmental trends and policies, the study shows cause for deep concerns... "As indicated in *Engineering Education for a Changing World*," ... engineering colleges must not only provide their graduates with the intellectual development and superb technical capabilities, but following industry lead, those colleges must educate their students to work as part of teams, communicate well, and understand the economic, social, environmental and international context of their professional activities".

Engineers must develop a fundamental understanding of their professional responsibilities. Few engineers have an opportunity, however, to develop or contribute to the development of a professional code of ethics. As a result, engineers are in danger of viewing codes of ethics as static, dictated by "others" for engineering application. Compare this to the process by which attorneys in the United States develop professional codes regulating their conduct. State bars and their members develop and periodically review their professional codes of conduct. Statewide debate about the codes can be heated and can produce significant discrepancies from state to state in rules of professional conduct. One should expect these discussions to become heated, since these codes describe how professionals (attorneys) will relate to clients, courts, the public, and other attorneys. At the end of the review process, the code describes how the parties will "relate to one another" (using Skooglund's terminology). Partially due to the process used to develop and review their codes of professional conduct, attorneys tend to internalize these codes.

National Development refers to the ability of a country to improve the social welfare of the people by providing social amenities like good education, infrastructure, medical care and social services

1. The role of engineer in national development

The role of Engineer in national development refers to the application of knowledge of the mathematical and natural sciences, gained by study, experience, and practice in the provision of social amenities like good education, infrastructure, medical care and social services.

2. Specific aspects of national development in which engineers play a vital role

Specific Aspects of National Development in which Engineers Play a Vital Role

Educational Growth: Engineers play the role of guidance and counselling to students at tender age at secondary school level in taking decision on the choice of courses of career by sensitizing them towards the technical and engineering disciplines

Engineers in tertiary institution in Polytechnic and Universities prepare the undergraduate by taking them through the practical knowledge of their different fields of engineering thereby impacting upon them from their wealth of knowledge and experience.

Engineers inculcate in the undergraduates the need for entrepreneurial skills for sustainable development rather than seeking and indulging in the get rich quick practices.

3. Community Development: The Engineer deals with the creation, improvement, and protection of the communal environment, providing facilities for living, industry and transportation, including large buildings, roads, bridges, canals, railroad lines, airports, water-supply systems, dams, irrigation, harbors, docks, aqueducts, tunnels, and other engineered constructions within a given community

4. Community Engineering: Like community Policing, community engineering plays a very important role in the monitoring of infrastructural development projects within the neighbourhood with a view to ensuring adherence to standards and ethics of engineering practice. Engineers within a community come together as volunteers to sponsor infrastructural development projects like boreholes, water distribution network, construction of drainages, culverts etc.

5. Incorporation of Engineering Companies: The coming together of Engineers to incorporate Engineering firms has come a long way in fostering National development by ensuring continuity in Engineering infrastructural development project, unlike in situations where Engineering firms are family biased where probably the principal partner is the only Engineer and his demise means the folding up of the company.

6. Engineers and Politics: Decision making for National Development is made at the highest level of Government. Involvement of Engineers in politics affords them the opportunity to be at these policy/decision making bodies. Engineers at these levels, use their professional knowledge to attract and defend important engineering infrastructural development projects. Similarly, Engineers in politics contribute to the enhancement of the welfare of other. Engineers thereby motivating them to higher productivity for national development.

7. Engineers in Public Service: Most of the Engineering Development Projects are being conceptualized, designed, supervised, evaluated and certified by the Engineers in the Public Service. These Engineers also ensure that these projects are executed according to specifications. They also make necessary input towards the procurement of Engineering Project

Q.4. Explain the Professional Ethics of an Engineer during his professional involvement with the other engineers with examples. **(10)**

Ans. *Engineering Ethics is the set of rules and guidelines that engineers adhere to as a moral obligation to their profession and to the world. Engineering is a professional career that impact lives. When ethics is not followed, disaster often occurs, these disasters not only include huge monetary costs and environmental impacts, but also often result in the loss of human life. Engineering Ethics applies to every engineer and is very important.*

The National Society of Professional Engineers (NSPE) decides the overall standards and codes of ethics for all the engineering professions. The Preamble of the NSPE *Code of Conduct for Engineers* (2007) states:

"Engineers shall at all times recognize that their primary obligation is to protect the safety, health, property, and welfare of the public. If their professional judgment is overruled under circumstances where the safety, health, property, or welfare of the public are endangered, they shall notify their employer or client and such other authority as may be appropriate."

This means that engineers should always be aware that their safety and the safety of those around them comes before anything, including any engineering projects they

take on, no matter how wonderful the end product might be. That being said, engineering standards change from one professional engineering society to the next because of the work that different type of engineers do. For example, the work that a civil engineer does (e.g. construct a bridge) will be different from the work that a biomedical engineer does (e.g. making an artificial heart). However, no matter what type of engineer you are, Engineering Ethics is important because if you do not follow it you can be putting yours and someone else's life in danger.

Electrical Engineering Ethics: Electrical Engineering is a type of engineering profession that deals with the creation of better electronics. Since our society is heading towards an era of technology, where all members of society will be affected, it is especially important for electrical engineers to follow a code of engineering ethics. For electrical engineers, an important set of guidelines is the *Electrical Engineering Code of Ethics*, published by IEEE (n.d.), the major professional association for engineers working in the fields of electrical, electronics, computer engineering, and communications. The Code emphasizes above all else honesty and avoidance of endangerment to the public or the environment.

Problem Solving in Engineering Ethics: Every engineer will find himself in a conflicting position. For example, consider the case of a biomedical engineer engineering a potentially working artificial kidney. When he was on the clinical trial phase, he needs to decide whether to proceed with testing on humans. If he proceeds, and the device fails, a human test subject could die. If he succeeds, he will be saving the lives of the thousands of people who need kidneys in the future. Although he is in a touch predicament, he can make his decision better by using the steps of problem solving in engineering ethics to help him make the best decision. The steps of Problem Solving in Engineering Ethics are (Johanssen, 2009):

- ***State the Problem***: Clearly define what the ethical engineering problem is.
- ***Get the Facts***: Obtain all relevant facts to the matter (i.e. the different moral viewpoints) and then analyze them all.
- ***Identify and Defend Competing Moral Viewpoints***: Analyze the pro and cons of different moral viewpoints and pick the best course of action.
- ***Come up with a Course of Action***: Pick the best course of actions, and answer all un-answered questions.
- ***Qualify the course of Action***: Back up the course of action with facts or statistics.

In the scenario above, the biomedical engineer can first state the problem, which is whether or not to proceed with testing knowing that he could save the lives of thousands, or else kill the test subjects. He can then gather all the facts about the test subjects, the device he made, and the different moral viewpoints from others. He can then make a pro and con list of all the moral viewpoints. From this he must pick the best action to take and be prepared to defend it.

Reasons why Engineers Stray from the Code of Ethics

There are two main reasons why Engineers often stray from their code of ethics. The first reason is because they are overconfident in their work, which in turn causes them to neglect things that might be wrong with it. They may overlook small mistakes or remain stubborn about their beliefs because they think highly of their education level. However, in engineering, these small mistakes might be the very thing that causes a disaster (e.g. the Challenger and O-rings). Another reason why Engineers stray is that they are impatient. They are excited about their work and want to see it in action in the world, so they send it out before it's ready. Sometimes it is not even their fault, but the fault of their authority figures (i.e. boss or managers). Their authority figures can be impatient and give them a short deadline to work on the project. Impatience does not allow room for iterations of the processes involved in design, testing, and implementing a product or project. Iterations are often needed to increase confidence that the product will work and that, more importantly, it will work safely.

Thus, it is recommended that engineers check their work at least twice and even have others check their work no matter how little time they have left or no matter how excited they are about submitting the project. If they know they have a short deadline, they can either manage their time better to have room for several revisions or ask their boss for an extension. Engineers should also try to be open to other ideas and admit that they could be wrong.

Applications of Engineering Ethics

Engineering Ethics in College/Education

The main engineering ethics problem that college students are face with is academic integrity. Academic integrity can show itself in the form of cheating by copying someone's work, intentional cheating, plagiarism, and/or self-plagiarism.

However, professional ethics is something that can be learned even when it conflicts with personal ethics, as for example, a situation where you are personally okay with building a product that can harm the environment, yet save lives. You can learn professional ethics and realize that something that is harmful to the environment is not okay. Ethics codes can even help you see the bigger picture. For example, in the previous scenario, these codes can help you re-evaluate your ethics and realize that something that is harmful to the environment will eventually be harmful to the people around you and yourself.

Thus, there are many ethics classes in universities across the world. Some universities even require engineers to take classes on ethics. For example, Cohen et al. (2005) developed a model called the Air Model (AIR) to help students reflect and develop their personal code of ethics. AIR stands for Awareness (of ethical issues), Investigation (of those issues), and Responding (to those issues).

Engineering Ethics in the Professional World

In the professional world, ethical engineering problems come up in many cases. One of these includes the case of a professional using someone else's work that is published in the widespread market of publication. Another is the case of a professional using someone else's work that is not published yet and stealing their idea. Engineers who have good engineering ethics often have a good sense of the value of life. They don't hesitate to admit that they made a mistake because they know that the cost of not owning up to your mistakes can have disastrous consequences. It might even cost a human life.

Engineering Ethics in Companies

Not only do individual engineers have to be conscious of engineering ethics, but also companies. Companies have to be aware of their Corporate Social Responsibility and Environmental Responsibility. Corporate Social Responsibility is a company's responsibility to give back to the community that they profit from and to behave ethically so that both they and their community can benefit. Environmental Responsibility is a business's initiative to leave the environment (where it is taking its resources from) the same, if not better, that it is found it.

Engineering Ethics applied to Senior Design Project

Thus, as seniors in college, we are making the transition from an academic environment to a professional environment. The further we are in our career path, the more important ethics is, especially engineering ethics. Thus, the soon we start defining our ethics the better, beginning with our final project in college and the first design project of our lives: our Senior Design Project.

END TERM EXAMINATION [MAY-JUNE 2018]
EIGHTH SEMESTER [B.TECH]
HUMAN VALUES AND PROFESSIONAL ETHICS–II
[ETHS–402]

M.M. : 75

Time : 3 hrs.

Note: *Attempt all questions as directed. Internal choise is indicated.*

Q.1. Write short notes on any five of the following. **(5)**

Q.1. (a) Responsibility.

Ans. We have a few different ways that we talk about responsibility. There's being responsible, taking responsibility, acting responsibly, and having responsibilities. They are all related to doing the things we are supposed to do, and accepting the positive or negative outcome of our actions. A quick definition for responsibility is:

Being responsible means you do the things you are expected to do and accept the consequences (results) of your actions.

A responsibility is something you are expected to do. A responsibility might be a task you are expected to do. For example, your parents expect you to brush your teeth. Brushing your teeth is "a responsibility" and it is your responsibility to brush your teeth every day. Another task example is that your teacher expects you to finish your homework on time and to do your best job. So it's your responsibility to do your homework. A responsibility might be a way you are expected to act. For example, your parents expect that if you go to play at the park, you will play in a way that won't seriously hurt yourself or someone else. It's your responsibility to have fun in a safe and courteous way.

A consequence is the result or outcome of our actions. Consequences can be positive (good) or negative (not good). For example, if you are supposed to do your chores by Sunday at 5:00 and you get them done, the consequence of your actions is that you get paid and your parents are happy with you. In another example, if you leave your bike behind your dad's car and he doesn't see it and runs over it, the consequence of your action is that your bike is ruined.

When we act responsibly, or do the things we are responsible for doing, we have a positive consequence. A consequence is what happens as a result of our actions. When you are responsible, you have a positive outcome and you get the positive consequence for a job well done. If you are irresponsible, you feel the pain of a negative consequence for a job done poorly or not at all.

Being responsible leads to more trust and freedom because people know they can count on you to do the things you are expected to do. Being responsible can also be a big part of keeping you safe.

Examples of Responsibility and Consequences: Responsibility Example 1: Feeding the Dog Responsibility: Each morning you are expected to feed the dog.

Consequence if you are responsible: First, the dog has a full belly and is healthy. Second, your parents know they can trust you to do what you say you will do and will be more likely to give you space and freedom to manage your own time.

Consequence if you are irresponsible (not responsible): First, the dog is hungry and long-term you could harm the dog's health. Second, your parents are disappointed and feel they have to check up on you and control your behavior more.

Responsibility Example 2: Being home on time

Responsibility: You meet your friends at the park to play and are expected to be home by 5:30.

Consequence if you are responsible: You set an alarm on your watch and make sure you leave the park with enough time to get home by 5:30. Your mom is confident you are safe and well and she trusts you to go to the park and hang with your friends next time.

Consequence if you are irresponsible: You lose track of time and don't get home until 6:00. Your mom has had 30 minutes to worry about where you are and now she's upset. She says next time you can only go to the park if your big brother can go with you and supervise. You lost freedom and independence.

Q.1. (b) Living in harmony with society and nature. **(5)**

Ans. Society or human society is the set of relations among people Society or human society is the set of relations among people, including their social status and roles. By extension, society denotes the people of a region or country, sometime even the world, taken as a whole. Used in the sense of an association, a society is a body of individuals outlined by the bounds of functional interdependence, possibly comprising characteristics such as national or cultural identity, social solidarity, language or hierarchical organization. Human societies are characterized by patterns of relationships between individuals sharing a distinctive culture and institutions. Like other communities or groups, a society allows its members to achieve needs or wishes they could not fulfill alone. The world society may also refer to an organized voluntary association of people for religious, benevolent, cultural, scientific, political, patriotic, or other purpose. Today the term society is currently used to cover both a number of political and scientific connotations as well as a variety of associations. In order to facilitate the fulfillment of the basic aspirations of all human beings in the society, the following comprehensive human goal needs to be understood.

1. Right understanding is necessary for the human beings, for all human beings. When one does not have the right understanding one remains disturbed and also acts in a manner so as to create disharmony with other human being as well as with rest of nature.

2. Prosperity is needed in every family. Prosperity in the family means that the family is able to identify its needs and is able to produce/ achieve more than its requirements.

3. Fearlessness/Trust in society means every member of society feels related to everyone else and therefore there is trust and fearlessness.

4. Co-existence in nature means there is a relationship and complementarity among all the entities in nature including human beings.

Q.1. (c) Right conduct. **(5)**

Ans. Spiritual life is not a light matter. Always regard yourself as a beginner just commencing your sadhana. Never underestimate the importance of yama, niyama and sattwic virtues. They are everything. Self-realization and dharma, righteousness, are inseparable. Man evolves through the practice of dharma according to the situation in life, and eventually attains self-realization, the ultimate goal

Sadachara or right conduct is the foundation of yoga. Yoga is rooted in virtue. Ethical discipline is very necessary for success in yoga. One should be well established in sadachara right from the beginning of one's spiritual life. Sadachara is the practice of yama and niyama. Right conduct is superior to all branches of knowledge and the root of all prosperity. It is conduct that begets virtue, and it is virtue that prolongs life.

A person of right conduct has ideals, principles and mottoes. He strictly follows them, removes his weaknesses and defects, develops good conduct and becomes a sattwic

individual. He is very careful in behaving with his elders, parents, teachers, acharyas, sisters, brothers, friends, relatives and strangers. He attempts to know what is right and wrong, by approaching the wise and the saintly and studying the scriptures very carefully, and then treads the path of dharma.

Q.1. (d) Accountability. **(5)**

Ans. In ethics and governance, **accountability** isanswerability, blameworthiness, liability, and the expectation of account-giving. As an aspect of governance, it has been central todiscussions related to problems in the public sector, nonprofit and private (corporate) and individual contexts. In leadership roles, accountability is the acknowledgment and assumption of responsibility for actions, products, decisions, and policies including the administration, governance, and implementation within the scope of the role or employment position and encompassing the obligation to report, explain and be answerable for resulting consequences.

In governance, accountability has expanded beyond the basic definition of "being called to account for one's actions".It is frequently described as an account-giving relationship between individuals, e.g. "A is accountable to B when A is obliged to inform B about A's (past or future) actions and decisions, to justify them, and to suffer punishment in the case of eventual misconduct". Accountability cannot exist without proper accounting practices; in other words, an absence of accounting means an absence of accountability.

Accountability is an element of a RACI to indicate who is ultimately answerable for the correct and thorough completion of the deliverable or task, and the one who delegates the work to those responsible.

Q.1. (e) Safety and Risk. **(5)**

Ans. Safety is the freedom from risk. If you want to increase safety, you must first consider risk. Risk is the "probability or threat of damage, injury, liability or loss, or any other negative occurrence that is caused by external or internal vulnerabilities, and that may be avoided by preemptive action" Note that risk can be avoided by preemptive action. Herein lies the message we want to make sure all drivers understand. Behavior modification can increase safety. This is due to the fact that safety and risk have an inverse relationship. When one goes up, the other goes down. To increase safety, you need to decrease risk.

Since safety is directly related to risk, drivers must understand and be aware of factors that affect risk. A variety of factors govern risk. The key difference is control. Drivers can control some but not all risk factors. For example, controllable risk factors include driver behavior and the condition of the driver's vehicle. Uncontrollable risk factors include other drivers' behavior and the weather. So, how can drivers increase safety when they cannot control all the risk factors? The answer: Drivers must modify their own behavior, which is controllable, to compensate for uncontrollable risk factors. This requires awareness of risk factors and a willingness to modify their own actions. The more uncontrollable risks a driver faces in any given situation, the more the driver should modify his/her behavior.

Q.1. (f) Loyalty. **(5)**

Ans. Loyalty is a noble quality that is found not only in human beings, but also in pet animals, such as dogs, horses or elephants. The word 'loyalty' means 'fidelity to law' which is generally applicable in the case of the Sovereign of the State. But in its broader sense, it means one's steadfast-ness in allegiance to a person or cause, or to one's country or sovereign. Loyalty involves obedience, sacrifice and compassion of the heart.

Loyalty is a very broad term which may be applicable in case of one's family, locality or the country. A loyal per-son is ready to sacrifice even his own life for the sake of his master, friend, relative or the country. A loyal person bears a moral character, honest outlook, and disciplined manners.

A truly loyal man cannot be bribed or tempted to deviate from his own path. He is like a stone pillar which is firm and strong to stand any force that may try to penetrate through it. He is absolutely dependable in all circumstances of life.

In this world, there are only a few instances of loyal personalities, who are well-known. In those days, some of the kings and emperors were lucky to have certain loyal commanders who fought for their kingdom and saved their masters again and again from the hands of the enemies, even at the cost of their own lives.

Loyalty is common among the courageous soldiers and servants. There are also instances of pet animals, such as dogs, horses or elephants, who, out of loyalty, gave their lives for the interest of their masters.

Loyalty is a quality which is found mainly among the brave and the bold characters. Meek and weak persons are mostly found lacking in the spirit of loyalty. Loyal people can become great leaders, great commanders, or great administrators in life. Disloyal persons are hated and disbe-lieved by all. He is a curse to his people, to his society and to his country. He must be exposed and brought to task, as and when detected.

Loyalty forms the basis of human character, builds up the foundation of a free country, and demands all law-abid-ing citizens to be loyal and patriotic.

Q.1. (g) Truth. **(5)**

Ans. Truth is most often used to mean being in accord with fact or reality, or fidelity to an original or standard. Truth may also often be used in modern contexts to refer to an idea of "truth to self", or authenticity.

Truth is usually held to be opposite to falsehood, which, correspondingly, can also take on a logical, factual, or ethical meaning. The concept of truth is discussed and debated in several contexts, including philosophy, art, religion, and science. Many human activities depend upon the concept, where its nature as a concept is assumed rather than being a subject of discussion; these include most of the sciences, law, journalism, and everyday life. Some philosophers view the concept of truth as basic, and unable to be explained in any terms that are more easily understood than the concept of truth itself. Commonly, truth is viewed as the correspondence of language or thought to an independent reality, in what is sometimes called the correspondence theory of truth.

Various theories and views of truth continue to be debated among scholars, philosophers, and theologians. Language and words are a means by which humans convey information to one another and the method used to determine what is a "truth" is termed a criterion of truth. There are differing claims on such questions as what constitutes truth: what things are truthbearers capable of being true or false; how to define, identify, and distinguish truth; the roles that faith-based and empirically based knowledge play; and whether truth is subjective or objective, relative or absolute.

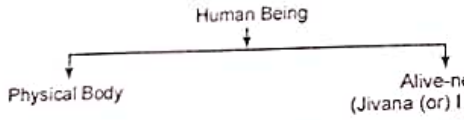
Q.2. Explain the term "pluralism in India". **(12.5)**

Ans. Refer Q.1(b) of First Term 2018.

OR

Q.2. Human Being is existence co-existence of self and body, explain.(12.5)

Ans. Human being is more than just a Body. He is a co-existence of both the Self(I/ Jivana) and the Body. There is an exchange of information between the two. Our body acts according to the suggestions given by our "Jivana".



All the human feelings of happiness, sorrow, pain, excitement etc. are all experienced by "I" and not the "Body".

		I Trust, Respect...	BODY Food, Clothing ...
Needs	Needs are...	Happiness (Sukh)	Physical Activities (Suvidha)
	In terms of Time, needs are ...	Continuous	Temporary
	In terms of Quantity, needs are...	Qualitative (no quantity)	Quantitative (limited in quantity)
Activities	Needs are fulfilled by...	Right Understanding and Right Feelings	Food, clothing etc.
	Activities are ...	Desiring, thinking, etc.	Breathing, heart-beat etc.
Type	It is of Type ...	Knowing, assuming, recognizing, fulfilling Conscious (non-material)	Recognizing, fulfilling Physico-chemical (material)

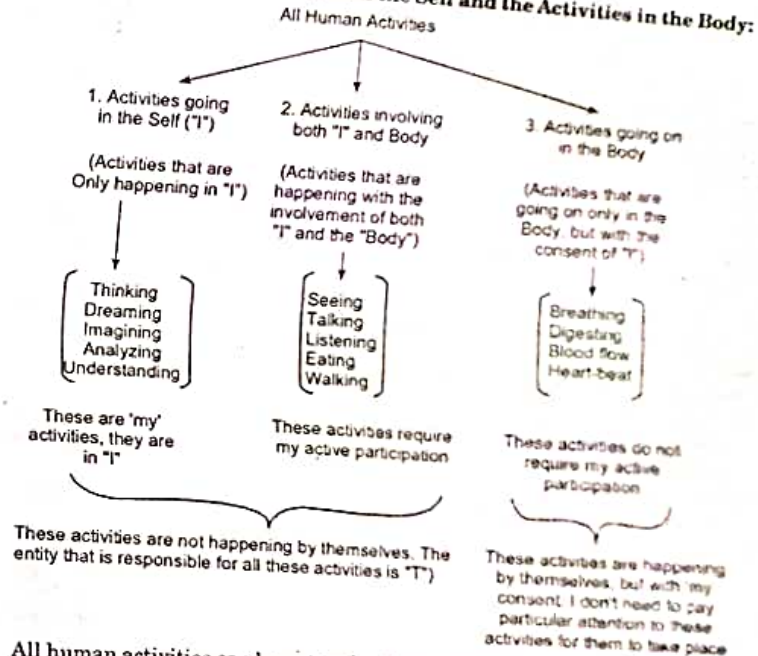
Having Physical Facilities ensures the fulfillment of the needs of the body, but it does not fulfill the needs of the "I".

Hence, for every human being, we need to fulfill the needs of both:

- Of "I" = Happiness (Sukha)
- Of "Body" = Physical Facilities (Suvidha)

One of these cannot replace the other.

Understanding the Activities in the Self and the Activities in the Body:



All human activities can be put under three categories –

- Activities that are going on in the Self **(Sentient Activities)**
- Activities that are going on in the Body **(Material Activities)**
- Activities involving both the Self and the Body

Bodily functions / Activities in the Body:

- The body is a set of "Self-organized activities" that occur with my (I) consent but without my(I) participation.

e.g.: the functions like breathing, digestion, organ functions

However some of these activities can be stopped by me (I) if I want.

e.g.: breathing

- The activities in the body can also be understood as the mutual interaction between two material entities for "recognition" and "fulfillment" of their relationship

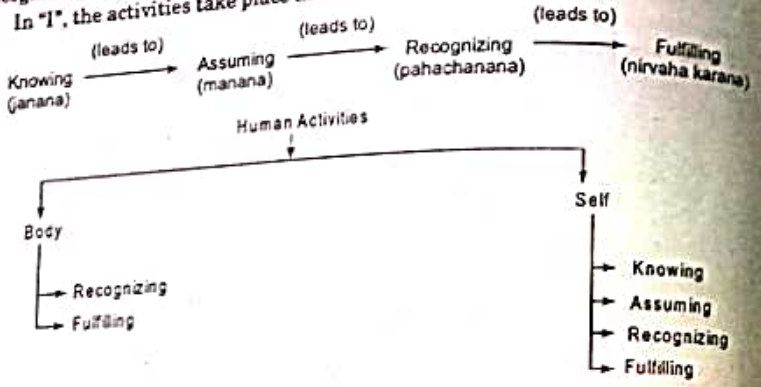
e.g.: "Body" recognizes its relation with "Water" and fulfills it (by absorbing the water we drink, to the extent needed and uses it for the nourishment of various organs)

Recognizing (Pahachanana) ⟶ Fulfilling (Nirvaha karana)

(leads to)

Activities in the Self / Jivana: Since "Jivana" is a conscious entity, in addition to "recognizing" and "fulfilling", it also carries out activities of "assuming" and "knowing".

In "I", the activities take place in the following order:



"Knowing" means we have the "Right Understanding". As a result of "knowing", we understand the reality. When we lack "Right Understanding", the faculty of "knowing" is dormant; and we only operate on the basis of assumptions. Wrong assumptions lead to wrong Recognition and wrong Fulfillment.

Examples of Activities of the Body Vs Activities of the Self:

Example 1: Activity of the Body: If a needle is pricked into your body, the needle goes inside if it is sharp and does not go inside if it is blunt.

Activity of the Self: If you (I) see the needle being pricked into your body, you oppose it because you that it is a needle and you assume that it is sharp. Your "Recognition" of this fact makes you avoid it (Fulfillment of your Recognition).

But if you "know" that it is a syringe with a needle, then you assume that it will cure you of your sickness. Then this "Recognition" makes you allow the needle to be pricked into your body (Fulfillment of your Recognition). Thus this different Recognition leads to a different fulfillment.

Example 2: If you see a snake and assume it to be a rope or vice-versa, then these different assumptions will lead to different recognitions and different fulfillments.

Understanding the Body as an instrument of "I":

("I" being the Seer, Doer and Enjoyer)

1. "I" am. The "Body" is.

- "I" knows I exist. I am a conscious/sentient entity.
- The "Body" doesn't know. It is a material entity.

2. "I" want to live. The "Body" is my instrument.

- "I" and my "Body" co-exist with each other.
- "I" takes decisions and the "Body" acts accordingly.

3. "I" want to live in Continuous Happiness. For my happiness, the Body needs Physical Facilities.

- For the "I" to enjoy the feelings of Strength and Health, my body needs food.
- To get the feeling of protection, my body needs clothing and shelter.
- To utilize my Body (Right Utilization of the body), I need various instruments, equipments etc. With the help of these, my body can make me feel happy.

4. My ('I') program for Continuous Happiness is to understand and to live in harmony at all the four levels. To fulfill my('I') program of achieving Continuous Happiness, the Body is provided with Physical Facilities.

- Ensuring Physical Facilities to the body consists of Production, Protection and Right Utilization.

Example: Producing Wheat, Protecting the wheat from extreme climate and pests, Right Utilization through proper consumption like avoiding wastage etc.

- Today, we have ignored the "I", we know only of the existence of the "Body" and we are only aiming at having more and more Physical Facilities. These facilities do not ensure good health, happiness or the right understanding in "I". Hence we should all pay urgent attention to include the program for "I".

5. I am the Seer, I am the Doer and I am the Enjoyer.

• I am the Seer

Behind all our activities of our Seeing, Understanding, Doing and Enjoying is a feeling of "I-ness" with which we identify ourselves. Every human being actually participates in a number of such activities everyday. In all these activities, the body acts only as an instrument. It is the "I" that sees or understands something.

For e.g.: Our eyes and ears act as instruments which help us to see or listen anything. They do not convey any any information. It is the "I" that understands what it has seen or listened to.

"Seer" also means the one who understands.

Hence I am the Seer (Drasta).

• I am the Doer

Once I have seen and understood something, I decide what I should/ should not do. I take the help of my body parts to accomplish the task I want to do.

For e.g.: I use my hands to write, my legs to walk etc. My body works as per the instructions given by me. Hence I am the Doer and I express my actions via my body.

Doer means "one who does" or "the one who takes decisions to do something".

Hence I am the Doer (Karta).

• I am the Enjoyer:

I use my body as an instrument to perform various activities. It is I who enjoy the pleasure derived out of those activities.

For e.g.: mouth helps to chew and the tongue to taste, but I enjoy the taste and flavour. I am the one feeling excited, angry, sad, happy etc. my body is only one instrument.

Enjoyer means "one who enjoys".

Hence I am the Enjoyer (Bhokta).

Q.3. Describe the four different levels of our living in harmony. (12.5)

Ans. Living my purpose has been on my mind a lot lately. I think it comes with the idea of retirement, and other times where we make a major change in the rhythms of our life. I know that living a life of purpose is what will provide me the richness I crave in life. What has elevated this topic in my thoughts is my current situation. I'm semi-retired and I'm on vacation. At the end of three weeks I go back to work, but what happens when I'm fully retired? What will that feel like?

I've used this trip as an opportunity to think about how I engage with my purpose. I've been curious about how I choose to spend my time when there are few other demands on it – other than the pleasant demands of my wife.

The exercise has been a good one. As the days of our trip have passed, a few things have become clearer for me with regard to the patterns and levels of how I live into my personal purpose. My first discovery is that I don't want to live into my purpose each waking moment of the day. I have a need for downtime and entertainment as well.

But when in a mindset of being purposeful, there seems to me to be four levels at which I find myself.

Performing tasks: This is the basic level of engagement – the stuff of to-do lists. Tasks which we know we have to do to support our purpose. We can't actually live our purpose if we aren't willing to do any work to make it happen. My list contains things like networking, building a website, developing materials, etc. It isn't always exciting stuff, but it has to be done.

Tasks feel familiar. If we don't pause to think about what we are doing, we might find ourselves feeling good about just being productive. Then, at the end of a day of crossing things off the to-do list we realize that we haven't moved the needle on engaging our purpose like we want.

I am loathe to put learning on this list as it is critical to personal growth, but I think I have to. Knowledge, without actively applying it, doesn't move us forward. Learning can be as distracting as doing tactical things.

It is worthwhile to ask myself before starting any task as to whether it is necessary right now to support my journey to actively living my purpose.

Self-awareness: If I am successful in managing my attraction to tasks and the associated feelings of accomplishment, then I can turn my attention to my level of self-awareness and self-care.

There is often a constant stream of demands from outside of us. Once again, it can feel both good and familiar to turn our attention to these demands, most of which are not aligned with our sense of purpose. By cultivating a state of self-awareness and presence, where I am able to see myself as separate from, but sharply aware of, the needs and wants of others then I'm able to make the best choice on how to serve my purpose at that time. For example, as a leader of people at work I may be asked how to do something by a team member. If I know the answer, it would be easy just to do it for them. However, by practicing presence I may see another choice – to coach that person through how doing it on their own. The latter approach is a better fit with my purpose and probably with my role at work as well. By being self-aware of what was going on in that relationship, I gave myself a choice.

That sounds easy, but it isn't always so. I think there are two fundamental components to achieving and maintaining this state. I find my relationship with these

two components very cyclical such that when I'm struggling with living my purpose I often return here to see what might be going on.

1. **Vitality for relationship.** This self-aware connection with others takes emotional energy. That energy comes from nurturing our overall level of joy and happiness. One of the most powerful ways of getting there is to spend time doing things we are passionate about. Take time for your passionate pursuits both inside and outside work. Even if you feel you don't have the time, you'll be amazed how it pays off for you when you need it!

2. **A state of presence.** This can be a challenge, as there are many things that distract our attention from what is happening *right now*. It could be anticipation of an upcoming event, it could be rehashing a meeting or conversation that just happened or any of a myriad of other things that emanate from the past or future. But we make choices in the present – *right now*! There are a number of schools of thought around presence. For me, it is our ability to enter and maintain a state where we can authentically see, hear and (most importantly) feel what is happening *right now* and be able to view in real time what we discover both from our perspective and the perspective of the other.

Embracing Purpose: My sense of getting to know my purpose is that it sort of "emerged" from my existing life. I was successful in my existing life, but not necessarily feeling rewarded. An inner exploration allowed me to discover my purpose (shifting the lives of people to the possibility of living and leading essentially) was already there waiting. Once discovered, I felt its pull on me to fulfil it.

Uncovering it was only the start of the journey, as I then needed to fully embrace it and live it. While we may not be rewarded by our existing life, we know how to "be" in that life. We're much less certain about our new life revolving around purpose and therefore find ourselves in a state of transition where it is important to focus on letting go of the old. I won't go into the whole approach here – if you are interested please read previous post: Four Steps To Make Transitions Easier. This to me might be the most critical level of them all. My sense is once we move on from the "old world" it is gone!

Engage: This is the fun part! This is what we were hoping for when we defined our purpose. The ability to live and work in a way that is completely fulfilling to us. We have done the required tasks, we are present in our pursuit of it and we have released our grip on our old way of being such that we have arrived here. Now it is up to us to be deliberate about our action, both what we do and what we don't do. We will find a ton of choice and scope here when we are ready for it.

As always, there will be many other factors at play that make it a bit more difficult. Economics, family, commitment, etc. For example, I'm in the midst of this right now as I am in France, and have a language barrier with almost everyone I meet. No matter how prepared I am, it is difficult for me to fully engage in my purpose when I don't have enough command of the language.

But to know that I am ready to engage, to continue to try to engage and even to fail at engaging can be rewarding! Passing through these levels can be cyclical, so knowing all of these levels and tendencies will be important for me to live into my purpose long term.

OR

Q.3. Be it television, magazines, or the Internet,media is omnipresent affecting various aspects of our lives. Describe the negative effects of such media on children and the society as a whole. **(12.5)**

Ans. Millions of dollars are spent every year by the advertising industry on ads that target children. Young audiences are bombarded with persuading messages through media such as the Internet, television, magazines, billboards, radio, etc.

According to research, an average child is exposed to over 40,000 commercials through TV every year. One study even alleges that in the U.S , children are spending

more time watching TV than they are in school, meaning that they are viewing more advertisements.

For decades, a part of the free market form of society has been advertised to children and it must be comprised as another part of a complex engine of the economy that works tirelessly to give everyone a better lifestyle. Advertising to children helps in generating jobs, putting money into the economy and instilling the importance of the freedom to choose at a young age. It also helps in developing a child's ability to comprehend the value of money and teaches them that a person can achieve anything if they have the will to pay the price.

Television Advertising to Children

As far as advertising goes, the biggest impact made on children is through television. According to a recent study, children spend about 4.5 hours every day watching TV. This means that they are bombarded with advertisements daily and the truth is that not even the top researchers know how they may be being influenced by these ads. How children react to them depends on a number of factors including their age, what they have experienced or know and how much opportunity they have had to ask questions and discuss what they see in the media.

Research suggests that when children watch more television, they are likely to want and demand more toys or other products. It is also suggested that they may notice ads more when they watch television on their own. According to a national survey of children's TV-watching behavior in 2010, 72 percent reported that they had no restrictions on the amount of time they could watch TV and 52 percent reported that they had the freedom to watch any type of content they wanted .

Studies have found that children do not have the ability to skeptically view marketing messages or even identify advertisements as marketing messages until they are in their teens. This means that marketing messages can be perceived as truths, and in many cases, those messages can stay with them until they become adults.

New research has shown that when companies advertise to children using characters or mascots, the brand becomes a loved one and the feeling that the product is healthy and wholesome can stick right to adulthood. This is despite the fact that the product is neither healthy nor wholesome. This is known to even apply to "line extensions", which are new versions of the product that are launched by the same brand. That advertising can have lingering effects that hamper an adult's ability to change their opinions on brands that are not healthy because they loved them as children.

Advertising and Alcohol and Tobacco Consumption among Children

Over the years, there have been a lot of research on alcohol and cigarette ads and their effect on children. More recently, there have been more subtle marketing strategies with the placement of certain products in films and TV shows. Studies show that advertisements can push unhealthy behaviors in children and adolescents. They also show that it is becoming increasingly difficult to protect them as companies market their products by exploiting the Internet and social media.

According to experts, the odds of underage drinking are increased by advertisements. A recent study showed that exposure to alcohol advertising is linked to an increase in adolescent alcohol use and this in turn is associated with higher levels of problems such as alcohol drinking and getting intoxicated, getting into fights and missing school. Through alcohol advertising, adolescents are being sold a commodity that they should not consume in any amount.

Food Advertising And Children: According to research, children and teens in the U.S. see an average of 12 to 14 food advertisements on television every day . Experts say that TV advertising plays a very important role in how foods are marketed to children. However, parents may not realize that advertising messages are also being relayed to children from other directions.

Advertisers have reward programs on their websites and they are also advertising on other websites and social media such as Facebook, Twitter, mobile apps and more. There is a huge number of ways that children are exposed to advertising. As they become increasingly tech-savvy, advertisers find better ways to get their messages across to young minds. For instance, there are "Advergames" that can be played online which are used to promote products .

So what is being marketed to children? According to experts, the top four products that advertisers are marketing are fast foods, sugary drinks, sugared cereals and candy . Studies on childhood obesity and its connection to screen time have shown that exposing a preschooler to a novel or new product for even just 30 seconds can change their preference for a brand. In another study, the effects of branding were looked at and 3 to 5 year olds were given two portions of identical foods. One portion was given in McDonald's wrappers. When asked to point out which foods tasted better, the children said that the ones with the McDonald's wrappers were better .

Fast or junk foods are one of the most commonly seen ads on television with pizzas, burgers and other delicious-looking foods being shown on screens every few minutes. Children see fit-looking adults munching on various junk foods and assume that they are healthy as they do not understand the concept of advertising. Research has found that consumption of fast foods has increased among children due to these ads. In fact, they have been so influenced by them that consumption of these unhealthy foods and snacks has almost doubled .

The rising popularity of fast foods and snacks has led to an increase of obesity, heart problems, diabetes and other serious health issues among children. This is a major problem, especially in developing countries where advertisers are targeting young children and teenagers. As mentioned, young, healthy-looking models are used, hiding the fact that these foods are some of the unhealthiest in the world. With so many such ads, bombarding television screens and children, it is time to start addressing the issue.

Negative Impact Of Advertisements On Children: Although there are some positive effects of advertising on children, the fact is that advertising can also have many negative effects on young minds, especially if parents are not careful and do not teach their children that money is important. In many cases, the messages in the ads are misinterpreted and it results in children having the wrong beliefs about a large number of issues. Advertising influences their minds, creating a need for them to own the product they see. Flashy ads on TV, magazines, the Internet and other forms of media only generate impulse buying.

Parents who are unable to deal with increasing demands or temper tantrums have a tendency to give in to their children's demands. This result in children getting used to the kind of lifestyle that is shown on television and other media forms. This creates the wrong impression on young minds that they will not be able to live a life that does not come with certain material things. Thus, it is certainly true that the power of advertising effects on children is one that cannot be ignored easily.

Some of the negative effects of advertising on children include:

- Advertisements encourage children to their parents to buy the products they see in commercials, regardless of whether they need them or not and whether they are useful or not. Many throw tantrums and use different tactics to force the adults to get them what they want.
- As mentioned earlier, children are likely to misinterpret the messages that are conveyed in commercials. Studies have shown that they also tend to focus on the negatives rather than the positive side of the messages.
- Flashy commercials and ads on TV, the Internet, magazines, etc. create a tendency for impulse shopping .

• Children tend to get attracted to high-end brands that advertise clothes, shoes and other products and disregard lesser-known ones that are not seen in ads.

• Many advertisements seen today involve dangerous stunts which children try to imitate as they do not understand the statutory warnings that come with the ads.

• With so many attractive commercials, marketing junk foods and unhealthy beverages, children's health has been adversely affected. These ads encourage unhealthy eating, which in turn has led to an increase in obesity, diabetes, heart problems and other conditions in young children .

• Child advertising may impact self-esteem, making them feel inferior to other children if they do not have the latest products that are seen in commercials.

• Sexually suggestive ads are everywhere these days. This makes children objectify women and also allows them to think that looking or acting a certain way is the only way to make friends or be popular. These ads also make young girl's body conscious and in many cases, can cause eating disorders like bulimia, anorexia, etc.

• With more commercials targeting children, reality and fantasy do not seem to be different. This can cause a lot of confusion among children, distorting their sense of reality.

Increasing Efforts: According to experts who have been studying the effects of advertising on children, psychologists can help parents and their children get smarter about the various strategies that advertisers use, particularly in schools. In fact, even though advertisers use schools as venues for marketing products, very little research has explored whether these ads in schools create a distraction for students from learning or increase the pressure on them to buy the advertised products.

Experts say that psychologists are required to help educators address and try to solve this problem. For example, they can help in creating interventions for media literacy so that children can be helped to understand the persuasive intent of advertisements. Psychologists can help in mounting public-information campaigns so that parents, teachers and legislators can have a better understanding of these issues.

In the past few decades, advertising has gone through tremendous changes and has increasingly targeted younger audiences. One such change is the use of the Internet to reach children in subtle ways, including through the games they play. In many cases, users are not even aware of the effort and undertaking of advertisers and marketers. Highly sophisticated advertising methods are used to reach children. However, experts say that there is virtually no research on how Internet interactivity is used to reach these younger audiences.

There are an increasing number of parents who support the use of psychologists to find out the effects of advertising on children and curbing them. No doubt parents are concerned about how advertisements are affecting their children. Their children make unreasonable demands due to the ads they see – new toys and unhealthy foods which they should be avoiding. These situations are extremely difficult for them to handle.

There is a material shift that is happening in society and this shift is having a major impact and an enormous influence, which are psychological in nature, on the lives of children. This requires the attention of psychologists as they may be the most helpful in showing the true nature of advertisements for children and their effects and society as a whole.

Q.4. The term globalization refers to the process of escalating connectivity and the interdependence of the world markets and business. Explain.

Ans. Globalization or globalisation is the process of interaction and integration between people, companies, and governments worldwide. Globalization has grown due to advances in transportation and communication technology. With increased global

interactions comes the growth of international trade, ideas, and culture. Globalization is primarily an economic process of interaction and integration that's associated with social and cultural aspects. However, conflicts and diplomacy are also large parts of the history of globalization, and modern globalization.

Economically, globalization involves goods and services, and the economic resources of capital, technology, and data. The steam locomotive, steamship, jet engine, and container ships are some of the advances in the means of transport, while the rise of the telegraph and its modern offspring, the Internet and mobile phones, show development in telecommunications infrastructure. All of these improvements have been major factors in globalization and have generated further interdependence of economic and cultural activities around the globe.

Though many scholars place the origins of globalization in modern times, others trace its history long before the European Age of Discovery and voyages to the New World, some even to the third millennium BC. Large-scale globalization began in the 1820s. In the late 19th century and early 20th century, the connectivity of the world's economies and cultures grew very quickly. The term *globalization* is recent, only establishing its current meaning in the 1970s.

In 2000, the International Monetary Fund (IMF) identified four basic aspects of globalization: trade and transactions, capital and investment movements, migration and movement of people, and the dissemination of knowledge. Further, environmental challenges such as global warming, cross-boundary water, air pollution, and overfishing of the ocean are linked with globalization. Globalizing processes affect and are affected by business and work organization, economics, socio-cultural resources, and the natural environment. Academic literature commonly subdivides globalization into three major areas: economic globalization, cultural globalization, and political globalization.

Economic globalization is the increasing economic interdependence of national economies across the world through a rapid increase in cross-border movement of goods, services, technology, and capital.Whereas the globalization of business is centered around the diminution of international trade regulations as well as tariffs, taxes, and other impediments that suppresses global trade, economic globalization is the process of increasing economic integration between countries, leading to the emergence of a global marketplace or a single world market. Depending on the paradigm, economic globalization can be viewed as either a positive or a negative phenomenon. Economic globalization comprises: Globalization of production, which refers to the attention of goods and services from a particular source from different locations around the globe to benefit from difference in cost and quality. Likewise, it also comprises globalization of markets; which is defined as the union of different and separate markets into a massive global marketplace. Economic globalization also includes competition, technology, and corporations and industries.

Current globalization trends can be largely accounted for by developed economies integrating with less developed economies by means of foreign direct investment, the reduction of trade barriers as well as other economic reforms, and, in many cases, immigration.

International standards have made trade in goods and services more efficient. An example of such standard is the intermodal container. Containerization dramatically reduced transport of its costs, supported the post-war boom in international trade, and was a major element in globalization. International Organization for Standardization is an international standard-setting body composed of representatives from various national standards organizations.

A multinational corporation or worldwide enterprise is an organization that owns or controls production of goods or services in one or more countries other than their

home country. It can also be referred as an international corporation, a transnational corporation, or a stateless corporation.

A free-trade area is the region encompassing a trade bloc whose member countries have signed a free-trade agreement (FTA). Such agreements involve cooperation between at least two countries to reduce trade barriers – import quotas and tariffs – and to increase trade of goods and services with each other. If people are also free to move between the countries, in addition to a free-trade agreement, it would also be considered an open border. Arguably the most significant free-trade area in the world is the European Union, a politico-economic union of 28 member states that are primarily located in Europe. The EU has developed European Single Market through a standardised system of laws that apply in all member states. EU policies aim to ensure the free movement of people, goods, services, and capital within the internal market. Trade facilitation looks at how procedures and controls governing the movement of goods across national borders can be improved to reduce associated cost burdens and maximise efficiency while safeguarding legitimate regulatory objectives.

Global trade in services is also significant. For example, in India, business process outsourcinghas been described as the "primary engine of the country's development over the next few decades, contributing broadly to GDP growth, employment growth, and poverty alleviation".

William I. Robinson's theoretical approach to globalization is a critique of Wallerstein's World Systems Theory. He believes that the global capital experienced today is due to a new and distinct form of globalization which began in the 1980s. Robinson argues not only are economic activities expanded across national boundaries but also there is a transnational fragmentation of these activities.One important aspect of Robinson's globalization theory is that production of goods are increasingly global. This means that one pair of shoes can be produced by six different countries, each contributing to a part of the production process.

Cultural globalization refers to the transmission of ideas, meanings, and values around the world in such a way as to extend and intensify social relations.This process is marked by the common consumption of cultures that have been diffused by the Internet, popular culture media, and international travel. This has added to processes of commodity exchange and colonization which have a longer history of carrying cultural meaning around the globe. The circulation of cultures enables individuals to partake in extended social relations that cross national and regional borders. The creation and expansion of such social relations is not merely observed on a material level. Cultural globalization involves the formation of shared norms and knowledge with which people associate their individual and collective cultural identities. It brings increasing interconnectedness among different populations and cultures.

Cross-cultural communication is a field of study that looks at how people from differing cultural backgrounds communicate, in similar and different ways among themselves, and how they endeavour to communicate across cultures. Intercultural communication is a related field of study.

Cultural diffusion is the spread of cultural items—such as ideas, styles, religions, technologies, languages etc. Cultural globalization has increased cross-cultural contacts, but may be accompanied by a decrease in the uniqueness of once-isolated communities. For example, sushi is available in Germany as well as Japan, but Euro-Disney outdraws the city of Paris, potentially reducing demand for "authentic" French pastry. Globalization's contribution to the alienation of individuals from their traditions may be modest compared to the impact of modernity itself, as alleged by existentialists such as Jean-Paul Sartre and Albert Camus. Globalization has expanded recreational opportunities by spreading pop culture, particularly via the Internet and satellite television.

Religions were among the earliest cultural elements to globalize, being spread by force, migration, evangelists, imperialists, and traders. Christianity, Islam, Buddhism, and more recently sects such as Mormonism are among those religions which have taken root and influenced endemic cultures in places far from their origins.

McDonald's is commonly seen as a symbol of Globalization, often called McDonaldization of global society.

Globalization has strongly influenced sports. For example, the modern Olympic Games has athletes from more than 200 nations participating in a variety of competitions.The FIFA World Cup is the most widely viewed and followed sporting event in the world, exceeding even the Olympic Games; a ninth of the entire population of the planet watched the 2006 FIFA World Cup Final.

The term globalization implies transformation. Cultural practices including traditional music can be lost or turned into a fusion of traditions. Globalization can trigger a state of emergency for the preservation of musical heritage. Archivists may attempt to collect, record, or transcribe repertoires before melodies are assimilated or modified, while local musicians may struggle for authenticity and to preserve local musical traditions. Globalization can lead performers to discard traditional instruments. Fusion genres can become interesting fields of analysis.

Music has an important role in economic and cultural development during globalization. Music genres such as jazz and reggae began locally and later became international phenomena. Globalization gave support to the world music phenomenon by allowing music from developing countries to reach broader audiences. Though the term "World Music" was originally intended for ethnic-specific music, globalization is now expanding its scope such that the term often includes hybrid subgenres such as "world fusion", "global fusion", "ethnic fusion", and worldbeat.

Use of chili pepper has spread from the Americas to cuisines around the world, including Thailand, Korea, China, and Italy.

Bourdieu claimed that the perception of consumption can be seen as self-identification and the formation of identity. Musically, this translates into each individual having their own musical identity based on likes and tastes. These likes and tastes are greatly influenced by culture, as this is the most basic cause for a person's wants and behavior. The concept of one's own culture is now in a period of change due to globalization. Also, globalization has increased the interdependency of political, personal, cultural, and economic factors.

A 2005 UNESCO reportshowed that cultural exchange is becoming more frequent from Eastern Asia, but that Western countries are still the main exporters of cultural goods. In 2002, China was the third largest exporter of cultural goods, after the UK and US. Between 1994 and 2002, both North America's and the European Union's shares of cultural exports declined while Asia's cultural exports grew to surpass North America. Related factors are the fact that Asia's population and area are several times that of North America. Americanization is related to a period of high political American clout and of significant growth of America's shops, markets and objects being brought into other countries.

Some critics of globalization argue that it harms the diversity of cultures. As a dominating country's culture is introduced into a receiving country through globalization, it can become a threat to the diversity of local culture. Some argue that globalization may ultimately lead to Westernization or Americanization of culture, where the dominating cultural concepts of economically and politically powerful Western countries spread and cause harm to local cultures.

Globalization is a diverse phenomenon which relates to a multilateral political world and to the increase of cultural objects and markets between countries. The Indian experience particularly reveals the plurality of the impact of cultural globalization.

Transculturalism is defined as "seeing oneself in the other".Transcultural is in turn described as "extending through all human cultures"or "involving, encompassing, or combining elements of more than one culture".

OR

Q.4. Discuss business ethics in Corporate governance. **(12.5)**

Ans. Corporate governance lies at the heart of the way businesses are run. Of ten defined as the 'way businesses are directed and controlled', it concerns the work of the board as the body which bears ultimate responsibility for the business. Governance relates to how the board is constituted and how it performs its role. It encompasses issues of board composition and structure, the board's remit and how it carried out and the framework of the board's accountability to its stakeholders. It also concerns how the board delegates authority to manage the business throughout the organization. The word 'Corporate Governance' (CG) has become a buzzword these days due to various corporate failures world over in recent past. The Corporate Governance represents the value framework, the ethical framework and the moral framework under which business decisions are taken. In other words, when investment takes place across national borders, the investors want to be sure that not only their capital handled effectively and adds to the creation of wealth, but the business decisions are also taken in a manner which is not illegal or does not involve moral hazards . The Corporate Governance basically denoted the rule of law, transparency, accountability and protection of public interest in the management of a company's affairs in the prevailing global and competitive market milieu. It called for an enlightened investing community and strict regulatory regimes to protect the rights of the investors and companies to improve productivity and profitability without recourse to any means which would offend the moral, ethical and regulatory framework of business.

Business ethics is a kind of applied ethics. It is the application of moral or ethical norms to business. The term ethics has its origin from the Greek word "ethos", which means character or custom- the distinguishing character, sentiment, moral nature, or guiding beliefs of a person, group, or institution. Ethics is a set of principles or standards of human conduct that govern the behaviour of individuals or organization. Ethics can be defined as the discipline dealing with moral duties and obligation, and explanation what is good or not good for others and for us. Ethics is the study of moral decisions that are made by us in the course of performance of our duties. Ethics is the study of characteristics of morals and it also deals with the moral choices that are made in relationship with others. Business ethics comprises the principles and standards that guide behaviour in the conduct of business. Businesses must balance their desire to maximise profits against the needs of the stakeholders. Maintaining this balance often requires tradeoffs. To address these unique aspects of businesses, rules- articulated and implicit are developed to guide the businesses to earn profits without harming individuals or society as a whole.

Advantages of Business Ethics More and more companies recognize the link between business ethics and financial performance. Companies displaying a clear commitment to ethical conduct consistently outperform companies that do not display ethical conduct.

Attracting and Retaining Talent People aspire to join organizations that have high ethical values. Companies are able to attract the best talent and an ethical company that is dedicated to talking care of its employees being equally dedicated in taking care of the organization. The ethical climate matters to the employees. Ethical organizations create an environment that is trustworthy, making employees willing to rely, take decisions and act on the decisions and actions of co-employees.

Investor Loyalty Investors are concerned about ethics, social responsibility and reputation of the company in which they invest. Investors are becoming more and more

aware that an ethical climate provides a foundation for efficiency, productivity and profits.

Customer Satisfaction Customer satisfaction is a vital factor in successful business strategy. Repeat purchases or orders and enduring relationship of mutual respect are essential for the success of the company. The name of a company should evoke trust and respect among customers for enduring success. This is achieved by a company that adopts ethical practices. When a company because of its beliefs in high ethics is perceived as such, any crisis or mishaps along the way is tolerated by the customers as a minor aberration.

Corporate Governance and Business ethics The national codes all emphasize the ethical nature of good corporate governance. Special emphasis is placed on the fact that good governance is based on a number of cardinal ethical values. Topping the list of the values that should be adhered to in good governance are the values of Transparency, accountability, responsibility and probability. These values should permeate all aspects of governance and be displayed in all actions and decisions of the board. The various aspects of governance, such as board complication and functioning reporting, disclosure and risk management, are seen as instrumental in realizing these cardinal values of good governance.

Q.5. Explain and discuss the two categories of Intellectual Property Rights(IPR). **(12.5)**

Ans. Intellectual property rights are like any other property right. They allow creators, or owners, of patents, trademarks or copyrighted works to benefit from their own work or investment in a creation. These rights are outlined in Article 27 of the Universal Declaration of Human Rights, which provides for the right to benefit from the protection of moral and material interests resulting from authorship of scientific, literary or artistic productions. The importance of intellectual property was first recognized in the Paris Convention for the Protection of Industrial Property (1883) and the Berne Convention for the Protection of Literary and Artistic Works (1886). Both treaties are administered by the World Intellectual Property Organization (WIPO). Why promote and protect intellectual property? There are several compelling reasons. First, the progress and well-being of humanity rest on its capacity to create and invent new works in the areas of technology and culture. Second, the legal protection of new creations encourages the commitment of additional resources for further innovation. Third, the promotion and protection of intellectual property spurs economic growth, creates new jobs and industries, and enhances the quality and enjoyment of life. An efficient and equitable intellectual property system can help all countries to realize intellectual property's potential as a catalyst for economic development and social and cultural well-being. The intellectual property system helps strike a balance between the interests of innovators and the public interest, providing an environment in which creativity and invention can flourish, for the benefit of all.

1. Industrial Property: Industrial Property again can be divided into two areas

• One area can be distinctive signs for Trademarks (TM) that distinguish the goods or services of one enterprise or undertaking from those of other enterprises or undertakings

Geographical Indications (GI) that identify a good originating in a place where a given characteristics of the good is essentially attributable to its geographical origin

• Other areas include Patents, Industrial Designs (IDs), Trade Secrets (TS) for innovation, design and the creation of technology

2. Copyrights and Rights related to Copyrights deals with :

• Authors' Literary works (e.g. novels, poems, plays, writings and books), Artistic works (e.g. paintings, sculptures, drawings and photographs), films, computer programs, musical compositions and architectural designs

• Neighboring Rights include rights of performers (e.g. actors, singers and musicians), broadcasting organizations in their radio and television programs, and producers of phonograms in their recordings.

OR

Q.5. Discuss the various kinds of pollutions in our environment with their causes. **(12.5)**

Ans. Environmental Pollution occurs when pollutants contaminate the surroundings; which brings about changes that affect our normal lifestyles adversely. Pollutants are the key elements or components of pollution which are generally waste materials of different forms. Pollution disturbs our ecosystem and the balance in the environment. With modernization and development in our lives pollution has reached its peak; giving rise to global warming and human illness.

Different types of Pollution: Environmental Pollution occurs in different forms; air, water, soil, radioactive, noise, heat/thermal and light. Every form of pollution has two sources of occurrence; the point and the non-point sources. The point sources are easy to identify, monitor and control, whereas the non-point sources are hard to control.

Toxic environmental pollution affects more than 200 million people worldwide, according to Pure Earth, a non-profit environmental organization. In some of the world's worst polluted places, babies are born with birth defects, children have lost 30 to 40 IQ points, and life expectancy may be as low as 45 years because of cancers and other diseases.Let us discuss the different types of pollution, their causes and effects on mankind and the environment as a whole.

Sources and Causes of Environmental Pollution

The sources and causes of environmental pollution includes the following:

Industrial activities: The industries all over the world that brought prosperity and affluence, made inroads in the biosphere and disturbed the ecological balances. The pall of smoke, the swirling gases, industrial effluents and the fall-out of scientific experiments became constant health hazards, polluting and contaminating both air and water. The improper disposal of industrial wastes are the sources of soil and water pollution. Chemical waste resulting from industry can pollute lakes, rivers and seas and soil too as well as releasing fumes.

Dumping solid waste: Household and commercial waste pollutes the environment when not disposed of properly.

Vehicles: The smoke emitted by vehicles using petrol and diesel and the cooking coal also pollutes the environment. The multiplication of vehicles, emitting black smoke that, being free and unfettered, spreads out and mixes with the air we breathe. The harmful smoke of these vehicles causes air pollution. Further, the sounds produced by these vehicles produces causes noise-pollution.

Rapid urbanization and industrialization: The urbanization and the rapid growth of industrialization are causing through environmental pollution the greatest harm to the plant life, which in turn causing harm to the animal kingdom and the human lives.

Population overgrowth: Due to the increase in population, particularly in developing countries, there has been surge in demand for basic food, occupation and shelter. The world has witnessed massive deforestation to expand absorb the growing population and their demands.

Combustion of fossil fuels: The combustion of fossil fuels pollutes the air, the soil and the water with noxious gases such as CO_2 and CO.

Agricultural waste: Fertilizers and pesticides used in agriculture are key causes of environmental pollution.

Types & Causes of Pollution:

Air Pollution: It is the most prevalent and dangerous form of pollution especially considered to go hand in hand with urbanization. There are many reasons to it. Primary among these is the excessive fuel combustion which has become a basic necessity for cooking, transport and other industrial activities. This releases umpteen no. of chemicals to the air which are far from being removed from it. These are directly affecting our existence.

Smoke releases SO_2 into the air making it toxic. It is caused mainly due to chimneys, factory stacks, vehicles or something as common as 'burning of wood'. Release of SO_2 and other greenhouse gases into air causes global warming and has capacity to cause acid rain. Global warming or emission of these gases has increased temperatures, erratic rains and droughts worldwide. This has heavily increased the cases of Asthma, Bronchitis and the more dangerous lung cancer, mainly in the metro cities.

Air pollution is believed to end lives of over 20 lakh people every year – a study, published in the journal Environmental Research Letters, says.

One of the major and unfortunate examples of what can air pollution lead to is the Bhopal Gas Tragedy of 1984. It was a direct result of release of methyl isocyanate gas at Union Carbide plant in Bhopal. It killed over 2,000 people, and over 200,000 suffered respiratory problems. An irritant (e.g. particulates less than 10 micrometers) may cause respiratory illnesses, cardiovascular disease and increases in asthma. Even today there are birth defects in the babies borne, which are believed to be because of the tragedy.

"The very young, the old and those with vulnerable immune systems are most at risk from air pollution. The air pollutant may be carcinogenic (e.g. some volatile organic compounds) or biologically active (e.g. some viruses) or radioactive (e.g. radon). Other air pollutants like carbon dioxide have an indirect impact on human health through climate change" – Prof. Harry Sealy, in an interview, to the 'Live Science' journal.

Water Pollution: Every living being depends, directly, on water so this has taken a heavy toll on the entire living population. Other than direct dependencies, more than 60% of the species live in some form of water. Thus water pollution is another major type of pollution that needs to be curbed.

It can be attributed to many factors -industrial effluent dumped into the rivers and sea causes a huge imbalance in the water properties which renders the water bodies unfit for aquatic lives. Water pollution is also a major cause of diseases caused to the non-aquatic species.

Insecticides, pesticides which are sprayed on the plants, pollutes the ground water system and oil spills in the oceans have caused irreparable damage to the water bodies. Eutrophication is another big source; it occurs due to daily activities like washing clothes, utensils near lakes, ponds or rivers; this forces detergents to go into water which blocks sunlight from penetrating, thus reducing oxygen and making it inhabitable.

According to National Oceanic and Atmospheric Administration (NOAA), 80 percent of the pollution in marine environments comes from the land through sources such as runoff. Water pollution can severely affect marine life. For example, sewage causes pathogens to grow, while organic and inorganic compounds in water can change the composition of the precious resource. According to the EPA, low levels of dissolved oxygen in the water are also considered a pollutant. Dissolved oxygen is caused by the decomposition of organic materials, such as sewage introduced into the water.

Water pollution not only harms the aquatic beings but it also contaminates the entire food chain by severely affecting humans dependent on these. Water-borne diseases like cholera, diarrhoea have also increased in all places.

. **Soil pollution:** Also known as Land Pollution, this occurs due to incorporation of unwanted chemicals in the soil due to human activities. Use of insecticides and pesticides absorbs the nitrogen compounds from the soil making it unfit for plants to derive nutrition from. Release of industrial waste, mining and deforestation also exploits the soil. Since plants can't grow properly, they can't hold the soil and this leads to soil erosion.

Food is a big contributor to landfill waste. Up to 40 percent of food produced in the United States is trashed each year, according to the Natural Resources Defense Council.

Commercial or industrial waste is a significant portion of solid waste. According to the University of Utah, industries use 4 million pounds (1.8 million kg) of materials in order to provide the average American family with needed products for one year. Much of it is classified as non-hazardous, such as construction material (wood, concrete, bricks, glass, etc.) and medical waste (bandages, surgical gloves, surgical instruments, discarded needles, etc.). Hazardous waste is any liquid, solid or sludge waste that contain properties that are dangerous of potentially harmful to human health or the environment. Industries generate hazardous waste from mining, petroleum refining, pesticide manufacturing and other chemical production. Households generate hazardous waste as well, including paints and solvents, motor oil, fluorescent lights, aerosol cans, and ammunition.

While the above three are most common forms of Pollution that we hear about, there are few other forms of Pollution that have seemed to grow at an alarming pace these days. Let us briefly look at what they are.

Noise pollution: It is caused when a noise which is of higher intensity than 85 db reaches our bare ears. It may lead to psychological problems like stress & hypertension. It can also lead to permanent hearing impairment, which is worse. It is mainly caused by loud pumps and compressors in the chemical industries. Even marriage functions and rock music concerts are often ignored contributors to this type of pollution.

Radioactive pollution: This is considered one of the most dangerous pollution because of its permanent effects. An unarrested upset in a nuclear plant , careless nuclear waste disposal, etc. It can cause cancer – skin, blood, infertility due to exposure, birth defects and blindness; It has the ability to permanently change soil, air and water – the major sources of life. It can even cause mutation in species which can propagate for ages.

Thermal/heat pollution: This is caused as a result of excessive heat release in the environment. This leads to irreversible and undesirable changes of almost permanent nature. Industries and Vehicles are direct contributors to this. Deforestation is an indirect contributor.Other than the greenhouse gases,zyada this has increased the earth's temperature, and has potential to cause drastic climatic changes; and wildlife extinction.

Light pollution: Whenever illumination available is more than what's required in an area, this pollution kicks in. It is more noticeable in big cities, on advertising boards and billboards, mainly during large scale events, vis-a-vis Concerts, sport events & even marriages, at the night. It mainly affects the astronomical observations by making the stars very difficult to observe & study.

Effects of Pollution

Environment Degradation: Environment is the first casualty for increase in pollution weather in air or water. The increase in the amount of CO_2 in the atmosphere leads to smog which can restrict sunlight from reaching the earth. Thus, preventing plants in the process of photosynthesis. Gases like Sulfur dioxide and nitrogen oxide can cause acid rain. Water pollution in terms of Oil spill may lead to death of several wildlife species.