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II/IV B.Tech(Regular/Supplementary) DEGREE EXAMINATION

April, 2017

Fourth Semester

Time: Three Hours

Computer Science & Engineering

Professional Ethics and Human Values

Maximum : 60 Marks

Answer Question No.1 compulsorily.

(1X12 = 12 Marks)

Answer ONE question from each unit.

(4X12=48 Marks)

1. Answer all questions

(1X12=12 Marks)

a) Define morals and values

Morals are the welfare principles enunciated by the wise people, based on their experience and wisdom. They were edited, changed or modified or evolved and a **value** is defined as a principle that promotes well-being or prevents harm.

b) Write a short note on Caring and Sharing?

Caring is feeling for others. It is a process which exhibits the interest in, and support for, the welfare of others with fairness, impartiality and justice in all activities.

Sharing is a process that describes the transfer of knowledge (teaching, learning, and information).

c) What is meant by standard experiment?

In standard experiments, members for study are selected into two groups namely A and B at random. Group A are given special treatment. The group B is given no treatment and is called the 'controlled group'. But they are placed in the same environment as the other group A. This process is called the experimental control.

d) What are cross cultural issues?

- Globalization
- Multiculturalism
- Development of international market etc
- Increase in jobs

e) Explain briefly Gilligan's theory?

It is based on the study on men and women

Features:

1. Reason
2. Emotional
3. Impact on relationships
5. Caring and concern
6. More of caring
7. Abstract
8. Future focus
9. Making exceptions
10. Dependence
11. Human-oriented

f) Define compromise and integrity

Compromise is defined as an agreement or settlement of a dispute that is reached by each side making concessions and Integrity is the quality of being honest and having strong moral principles.

g) What is meant by Whistle blowing?

process by which an employee conveys information about a significant moral problem to a person in a position to take action on the problem, outside the approved organizational channel is known as Whistle blowing.

h) What are professional responsibilities?

In pursuing professional responsibilities, this empowers one to form and exercise the professional judgment. Both Technical and moral judgements are included.

It includes i) Realistic assessment of skills (ii) Developing sense of responsibility (iii) giving their best efforts.

i) What is meant by voluntary risk?

Involvement of people in risky actions knowing that these actions are unsafe is known as Voluntary risk.

j) How to make the environment suitable to live?

We can make the environment suitable to live by decreasing the levels of pollution and by planting trees etc.

k) When is a 'gift' or a 'bribe'?

A **gift** is something of value given without the expectation of return; a **bribe** is the same thing given in the hope of influence or benefit.

l) What is the full form of "IPR"?

IPR stands for Intellectual property rights.

UNIT I

2. Explain Engineering Ethics.

12M

Engineering Ethics is the activity and discipline aimed at

(a) understanding the moral values that ought to guide engineering profession or practice,

(b) resolving moral issues in engineering, and

(c) justifying the moral judgments in engineering. It deals with set of moral problems and issues connected with engineering.

Engineering ethics is defined by the codes and standards of conduct endorsed by engineering (professional) societies with respect to the particular set of beliefs, attitudes and habits displayed by the individual or group.

Another important goal of engineering ethics is the discovery of the set of justified moral principles of obligation, rights and ideals that ought to be endorsed by the engineers and apply them to concrete situations. Engineering is the largest profession and the decisions and actions of engineers affect all of us in almost all areas of our lives, namely public safety, health, and welfare.

The scope of engineering ethics are twofold:

1. Ethics of the workplace which involves the co-workers and employees in an organization.
2. Ethics related to the product or work which involves the transportation, warehousing, and use, besides the safety of the end product and the environment outside the factory.

There are conventionally two approaches in the study of ethics:

1. Micro-ethics which deals with decisions and problems of individuals, professionals, and companies.
2. Macro-ethics which deals with the societal problems on a regional/national level. For example, global issues, collective responsibilities of groups such as professional societies and consumer groups.

There are two different senses (meanings) of engineering ethics, namely the Normative and the Descriptive senses. The normative sense include:

- (a) Knowing moral values, finding accurate solutions to moral problems and justifying moral judgments in engineering practices,
- (b) Study of decisions, policies, and values that are morally desirable in the engineering practice and research, and

- (c) Using codes of ethics and standards and applying them in their transactions by engineers. The descriptive sense refers to what specific individual or group of engineers believe and act, without justifying their beliefs or actions.

ANY 12 RELEVANT POINTS 12 MARKS

(OR)

3. Explain Kohlberg's theory and Gilligan's theory.

12M

Kohlberg's Approach [6M]

Age range	Stage	Substages
Birth to 9	Pre Conventional	1.Avoid Punishment 2.Gain reward
Ages 9 to 20	Conventional	1.Gain approval and avoid disapproval 2.Duty and guilt
Age 20 + may be never	Post-Conventional	1.Agreed upon rights 2.Personal moral Stands

Kohlberg's Theory:

1. Is based on the study on men.
2. Men give importance to moral rule
3. Ethics of rules and rights.

Features:

1. Justice
2. Factual
3. Right or wrong
4. Logic only
5. Logic and rule-based
6. Less of caring
7. Matter of fact (practical)
8. Present focus
9. Strict rules
10. Independence
11. Rigid
12. Taking a commanding role
13. Transactional approach [6 MARKS]

Gilligans Approach [6M]

Age range	Stage	Goal
Not listed	Pre Conventional	Goal is individual Survival
Transition is from selfishness to responsibility to others		
Not listed	Conventional	Self-sacrifice is goodness
Transition is from goodness to truth that she is a person too.		
May be never	Post-Conventional	1.Agreed upon rights 2.Personal moral Stands

Carol Gilligan's Theory:

1. Is based on the study on men and women
2. Women always want to keep up the personal relationships with all the persons involved in the situations.
3. Women give attention to circumstances leading to critical situations rather than

rules: (context-oriented and ethics of care)

Features:

1. Reason
2. Emotional
3. Impact on relationships
5. Caring and concern
6. More of caring
7. Abstract
8. Future focus
9. Making exceptions
10. Dependence
11. Human-oriented
12. Shying away from decision-making
13. Transformational approach

[6 MARKS]

UNIT II

4. Describe in detail the concept of 'Risk-Benefit analysis and reducing risk'. 12M

Which engineers sometimes use to help analyze risk and to determine whether a project should proceed is called risk-benefit analysis. In risk-benefit analysis the risks and benefits of the project are assigned dollar amounts, and most of favorable ratio between risks and benefits is sought. The risks are much harder to quantify and more difficult to put a realistic price. It is useful technique if used as a part of a broader analysis and only if used objectively. In doing risk-benefit analysis one who must consider who takes the risk and who reaps the benefits. It is important to be sure that those who are taking the risks are also those who are benefiting. This consideration is fundamental to issues of economic justice in our society and can be illustrated by the concept of environmental racism which is the placing of hazardous waste sites, factories with unpleasant. The only ethical way of implement risk-benefit analysis is for the engineer to ensure to the greatest extent possible that the risks as well as the benefits of his design are shared equally in society.

Reducing risk:

1. Defining the problem.
2. Generate several solutions
3. Analyze each solution to determine the pros and cons of each.
4. Test the solution
5. select the best solution.
6. Implement the chosen solution

(OR)

5. Explain the rights and responsibilities of an Engineer. 12M

Rights:

Regardless of professional status, including the right to privacy, the right to participate in activities of one's own choosing outside of work, the right to reasonably object to company policies without fear of retribution and the right to due process. The most fundamental right of an engineer is the right of professional conscience. This involves the to exercise professional judgment in discharging one's duties and to exercise this Judgment in an ethical manner. No Employer can ask or pressurize an employee into doing something that he considers unethical and unacceptable. Although this issue is very clear in case for which an engineer refuse an assignment based on an ethical principle that is not shared by every one.

Any other 6 relevants point 6 Marks will be awarded

Responsibilities:

1. Professional Responsibility Involves the realistic assessment of skills and capacities and the acceptance of their possibilities and limitations.
2. This is core virtue on enabling the professional to acknowledge the responsibility of others.
3. TO accept personal responsibility and to work as a team
4. Problems arise when professionals develop an inflated sense of responsibility.
5. Seeing themselves as responsible for more than can be or ought to be.
6. Realism is critical to ensure the best contribution from all members of the team

Any other 6 relevants point 6 Marks will be awarded

UNIT III

6. a) What are the concepts of livable ethics? 6M
- livability is best understood as an individual's ability to access opportunities to improve his or her quality of life. However, one person's pursuit of quality of life can actually detract from the livability of another. This concept is particularly true in transportation, as one person's travel inherently touches the lives of others along the pathway. As wealth and social status often play a key role in determining whose pursuit of quality of life wins, a moral and ethical framework must be at the heart of the achievement of livability. Therefore, livability in a just society requires that all individuals be ensured equal access to such opportunities.

Any 6 relevant point 6 Marks will be awarded

- b) Technology is disadvantageous in many ways. Express your reasons 6M
- Disadvantages**
- Job loss – replacing humans;
World destruction weapons – increasing endless wars;
Increased loneliness – social isolation;
Competency – increased dependency on modern tools that reduces our creativity and intelligence.

Any 6 relevant point 6 Marks will be awarded

(OR)

7. Explain how engineers can grow as morally creative leaders and the role of professional bodies for such a growth. 12M

Engineers provide many types of leadership in the development and implementation of technology, as managers, entrepreneurs, consultants, academics and officials of the government. Moral leadership is not merely the dominance by a group. It means adopting reasonable means to motivate the groups to achieve morally desirable goals. This leadership presents the engineers with many challenges to their moral principles.

Moral leadership is essentially required for the engineers, for the reasons listed as follows:

1. It is leading a group of people towards the achievement of global and objectives. The goals as well as the means are to be moral. For example, Hitler and Stalin were leaders, but only in an instrumental sense and certainly not on moral sense.

2. The leadership shall direct and motivate the group to move through morally desirable ways.

3. They lead by thinking ahead in time, and morally creative towards new applications, extension and putting values into practice. 'Morally creative' means the identification of the most important values as applicable to the situation, bringing clarity within the groups through proper communication, and putting those values into practice.

4. They sustain professional interest, among social diversity and cross-disciplinary complexity. They contribute to the professional societies, their professions, and to their communities. The moral leadership in engineering is manifested in leadership within the professional societies. The professional societies provide a forum for communication, and canvassing for change within and by groups.

5. Voluntarism: Another important avenue for providing moral leadership within communities, by the engineers is to promote services without fee or at reduced fees (pro bono) to the needy groups. The professional societies can also promote such activities among the engineers This type of voluntarism (or philanthropy) has been in practice in the fields of medicine, law and education. But many of the engineers are not self-employed as in the case of physicians.

6. Community service: This is another platform for the engineers to exhibit their moral leadership. The engineers can help in guiding, organising, and stimulating the community towards morally- and environmentally-desirable goals.

Any 6 relevant point 12 Marks will be awarded

UNIT IV

8. a) Explain Bhopal gas tragedy. 6M

- When it Happen----- 1M
- Consequences----- 2M
- Environmental effect----- 1M
- Conclusion----- 2M

b) Write about Chernobyl disaster. 6M

- When it Happen----- 1M
- Consequences----- 2M
- Environmental effect----- 1M
- Conclusion----- 2M

(OR)

9. Explain importance of codes of ethics. 12M

The Code of Ethics and Standards of Professional Conduct ("Code and Standards") are the ethical benchmark for investment professionals around the globe, regardless of job title, cultural differences, or local laws. Practice his profession with integrity, conscience, dignity and honour and flow the best tradition of the profession. The principles of ecosystemic interdependence diversity, maintenance, resource recovery and inter-relational harmony from the basis of our continued existence. Hold paramount the safety, health and welfare of the people and the protection of the environment.

Uphold and maintain confidentiality and respect for secrets confided in him & by the clients, employers and employees in connection with any professional work undertaken by him. Conduct without consideration of cast, creed, sect, social status, and shall not perform and act against the interest of the action.

General moral imperatives for code of ethics:

- 1) contribute of society and human well being.
- 2) avoid harm to others
- 3) Be honest and trust worthy
- 4) be fair and take action not to discriminate
- 5) honour property rights including copyrights and patent.
- 6) Give proper credit for intellectual property
- 7) Respect the privacy of others.
- 8) Honour confidentiality.

Any 12 relevant point 12 Marks will be awarded

Signature of HOD, IT.

S.no	Faculty Name	College Name	Contact Number	Signature