What are the senses of Engineering ethics?

5.2 SENSES(meanings) OF ENGINEERING ETHICS

1. Normative and 2. Descriptive senses.

The normative sense includes:

(*a*) Knowing moral values, resolving 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

(c) Using codes of ethics and standards and implementation

The descriptive sense includes :

Specific individual or group of engineers believe and act, without justifying their beliefs or actions.

What is a moral dilemma? List the steps to solve it.

Dilemmas are situations in which moral reasons come into conflict, where one is not clear of the immediate choice or solution of the problems.Moral reasons could be rights, duties, goods or obligations. This makes the decision making complex.

- For example, a person promised to meet a friend and dine, but he has to help his uncle who is involved in an accident — one has to fix the priority.

2 Steps to Solve Dilemma

The logical steps in overcome moral dilemma are:

1. Identification of the moral factors and reasons referring the professional codes of ethics, as interpreted by the professional experience i.e Conceptual Inquiry.

2 Talking with colleagues who can focus or narrow down the choice of values.

3. Collection of all information, data, and facts (factual inquiry) relevant to the situation.

3. Rank the moral options in the perspective of their impact on the society and indivisual. For example,give higher priority to public and environment issues, as compared to the individuals issues.

4. Explore alternate courses of action to resolve the dilemma by writing the main options and sub-options chart.

5.If no ideal solution possible choose course of action of average satisfaction level.

Short Note on computer ethics.

Computer ethics is defined as (*a*) study and analysis of nature and social impact of computer technology,(*b*) formulation and justification of policies, for ethical use of computers.

Problems in computer ethics.

(a) Hacking b) Spreading virus (c) Health hazard due to e –Waste and radiation

d) defrauding a bank or client

e). Elimination of routine and manual jobs and creation of skilled and IT-enabled service jobs

f)Computer failure and disturbance in transactions.

Measures to maintain Computer Ethics

1.The privacy of the individuals or organizations, confidentiality, integrity by deploying only the authorized persons

2.Uninterrupted service. By installing appropriate uninterrupted power supply or back-up provisions

3.Protection against hacking are Licensed anti-virus packages and firewalls are used by all computer users to ensure this protection.

4. Computer software Security: By Passwords and data encryption

5.Constitution Cyber laws.

Professional Responsibility

The computer professionals should be aware of different conflicts of interests as they transact with other at different levels. The IEEE and Association for Computing Machinery (ACM) have established the codes of ethics to manage such responsibilities.

Explain responsibilities of a manager.

The duties of engineers as managers are:

1. Promote an ethical climate, through framing of organization, administration, planning, finance,production and marketing, health and safety, evaluation policies and responsibilities and by considering personal attitudes and obligations.

2. Resolving conflicts, by evolving priority, developing mutual understanding, generating options as alternative solutions to problems.

3. The engineers have the responsibility to protect the safety, health, and welfare of the public. .

Compare Gilligan and Kohlberg moral development theories.

Kohlberg's Theory	*Carol Gilligan's Theory*
A. Basic Aspects	
1. Is based on the study on men.	1. Is based on the study on men and women
2. Men give importance to moral rule.	2. Women always want to keep up the personal relationships with all the persons involved in the situations.
3. Ethics of rules and rights.	3. Women consider context-oriented and ethics of care
B Characteristic Features	
1. Justice	1. Reason
2. Factual	2. Emotional
3. Right or wrong	3. Impact on relationships
4. Logic only	4. Compassion too
5. Logic and rule-based	5. Caring and concern
6. Less of caring	6. More of caring
7. Matter of fact (practical)	7. Abstract
8. Present focus	8. Future focus
9. Strict rules	9. Making exceptions
10. Independence	10. Dependence
11. Rigid	11. Human-oriented
12. Taking a commanding role	12. Shying away from decision-making
13. Transactional approach	13. Transformational approach