

**DEPARTMENT OF MECHANICAL ENGINEERING**

**GE 6075 Professional Ethics in Engineering**

**V SEMESTER**

**UNIT -I**

**PART A**

1. What are human values ?
2. What are ethical values ?
3. Distinguish values from ethics and culture.
4. What is integrity?
5. Define work ethics.
6. What is service learning?
7. Mention some civic virtues.
8. Write short notes on caring and sharing.
9. What is honesty?
10. What is courage as a value?
11. Define cooperation.
12. Define empathy.
13. Define spirituality.
14. Define integrity.
15. Define compromise.
16. List out any two aspects of honesty.

17. Define self respect and self esteem.
18. What is commitment?
19. What is meant by self confidence?
20. What is stress management?

## **PART B**

1. Explain some important human values.
2. Write a detailed note on work ethics.
3. Explain integrity and honesty in ethics.
4. Explain the importance of self confidence in ethics.
5. List important time wasters. How can one manage time properly?
6. . Explain caring, sharing and living peacefully.
7. Explain commitment and empathy.
8. Explain civic virtue and respect for others and also explain importance of cooperation.
9. Explain character and spirituality and their importance in ethics.
10. Explain the role of Yoga and meditation in the field of professional excellence and stress management.

## **UNIT 2**

### **PART-A**

1. What are the senses of Engineering Ethics?
2. Define Moral Dilemma.
3. What is Moral Autonomy?
4. State Kohlbergs theory.
5. State Gilligans theory.
6. What is meant by consensus?
7. State the implications of Controversy.
8. Mention few steps in confronting Moral Dilemma.
9. Mention the models of professional roles.
10. State the theories about right action.
11. State the significance of Self Interest.
12. Narrate the significance of Customs.
13. State the significance of religion.
14. Mention various ethical theories available.
15. State the problem of vagueness.
16. Specify the problem of conflicting reasons.
17. State the principle of Utilitarianism.
18. State the various types of Inquiries available?
19. What is meant by ethical egoism?

20. What is meant by customs relativism?

### **PART-B**

1. (a). Explain the scope of Engineering Ethics . Highlight the importance of Ethics.  
(b). Explain in details about the senses of Engineering Ethics.
2. (a). Discuss in detail the various types of Moral issues  
(b). Specify the various types of Ethical inquiries available.
3. Discuss in detail about the concept of
  - a). Moral Dilemmas.
  - b). Moral Autonomy.
4. Discuss in details about
  - a) Gilligans Theory ( 8 Marks)
  - b) Kohlbergs Theory ( 8 Marks)
5. Explain about
  - a) Consensus and Controversy (8 Marks)
  - b) Heinzs Theory (8 Marks)
6. Explain in detail about Professional and Professionalism.
7. Explain in details the professionalism ideals and virtues.
8. Discuss in details the various theories about right action.
9. Explain in detail the traits of Self Interest, Customs and Religions.
10. Explain in details the various ethical theories and their uses.

## **UNIT 3**

### **PART-A**

1. What are the conditions required to define a valid consent?
2. What are the two main elements which are included to understand informed consent?
3. What are the general features of morally responsible engineers?
4. What is the purpose of various types of standards?
5. Define Code?
6. Enumerate the roles of codes?
7. Give the limitations of codes?
8. What are the problems with the law in engineering?
9. What is the need to view engineering projects as experiments?
10. Differentiate scientific experiments and engineering projects?
11. What are the uncertainties occur in the model designs?
12. Comment on the importance of learning from the past, using Titanic disaster, as an example?
13. Give any two prominent features of contemporary engineering practice that differentiate casual influence and moral accountability in engineering?
14. Define Ethical Conventionalism?
15. Mention some universally accepted ethical principles.

16. What is meant by Engineering Experimentation.
17. State the importance of Ethical codes.
18. What do you understand by balanced outlook on law.
19. What are the two elements of two informed consent?
20. In what ways engineering experiment differs from standard experiments.

### **PART-B**

1. How can engineer become a responsible experimenter? Highlight the code of ethics for Engineers.
2. What is the important code of ethics? Give brief account on '4' canons of codes of ethics quoted by international standard or association.
3. Discuss on the roles played by the codes of ethics set by professional societies.
4. Compare and contrast engineering experiments with standard experiments.
5. Explain with help of examples of that engineers would learn not only from their earlier design and operating results, but also from those of those of engineers of other engineers.
6. Explain in detail about engineers as responsible experimenters.
7. Explain detail about balanced outlook on law.
8. Explain detail about industrial standards.
9. Explain detail about engineering as experimentation.

10.State the various problems of law in Engineering.

**UNIT-4**

**PART-A**

1. State the significance of Safety.
2. Define Risk
3. What is meant by disaster?
4. Draw the assessment curve on safety and risk.
5. State the significance of Scenario Analysis
6. What is FMEA?
7. What is FTA?
8. State the significance of Event Tree Analysis(ETA)
9. Differentiate between Risk analysis and Risk benefit analysis
10. Mention few steps to reduce risks.
11. What is meant by Liability?
12. What is meant by Safe Exit?
13. What is causal responsibility?
14. What is intellectual property right?
15. What is collective bargaining?
16. What do you mean by conflict of interest.?Give example.

17. Distinguish between authority and power.
18. Specify few employees rights.
19. What is disadvantages of collective bargaining?
20. What is meant by occupational crime?

### **PART-B**

- 1.(a).What are the main elements of IPR. Give examples of Discrimination. (8 marks)  
(b).State the necessity of Risk Benefit Analysis. (8 marks)
- 2.(a).Write short notes on Occupational crime. (8 marks)  
(b).Distinguish between employee rights and professional rights. (8 marks)
- 3.Discuss the significance of Intellectual Property rights. Also explain the legislation covering IPR in India.
- 4.Define Risk Benefit analysis. Why it is conducted?.What are the limitation of RBA?
- 5.(a).Define the term Risk and Safety. How we an engineer assess the safety? (8 marks)  
(b).What are the factors that affect risk acceptability? What is the use of knowledge of risk acceptance to engineer? (8 marks)
- 6.Discuss the features, guideline and procedures of whistle blowing
- 7.Discuss Event Tree analysis with some practical example of risk analysis.
- 8.Explain the concept of liability with suitable example.
- 9.Explain the concept of Confidentiality in detail.



10. What are the types of conflicts of interests and the different ways to avoid conflicts of interests?

## **UNIT-5**

### **PART-A**

1. State few advantages of Multinational Corporations.
2. Mention few disadvantages of MNCs.
3. What is meant by environmental ethics?
4. What is meant by computer ethics?
5. What is corporate responsibility?
6. What is social responsibility?
7. Define Code of conduct
8. What is moral leadership?
9. Specify few global issues.
10. What is meant by acid rain?
11. What is meant by Globalization?
12. Differentiate Privacy and Anonymity.
13. What is meant by computer crime?
14. What is meant by Ethical climate?
15. What is meant by Professional obligations?
16. What is meant by Value guided advocates?

17. What is meant by Value-Neutral Analysts?
18. Define Conflict resolution
19. What is Global cyber business?
20. What is meant by water balances?

### **PART-B**

1. Explain in detail the various advantages and disadvantages of MNCs.
2. Discuss in details about Environmental Ethics.
3. Explain and Enumerate the significance of the concept of Computer Ethics.
4. Describe in details about the Global issue of Weapons development.
5. Justify with suitable examples Engineers as Managers.
6. Justify Engineers as Expert witness and Advisors with suitable examples.
7. Explain in details about Moral Leadership.
8. Discuss in details about Code of Conduct.
9. Describe in details about Corporate Responsibility.
10. Explain in details about the Management of conflicts and the Principles of conflict Resolution.