



Name :

Roll No. :

Invigilator's Signature :

CS / B.TECH(ME / PE / AUE) / SEM-7 / HU-701 / 2011-12
2011

ETHICS IN ENGINEERING PROFESSION

Time Allotted : 3 Hours

Full Marks : 70

The figures in the margin indicate full marks.

Candidates are required to give their answers in their own words as far as practicable.

GROUP – A

(Multiple Choice Type Questions)

1. Choose the correct alternatives for any *ten* of the following :

10 × 1 = 10

i) Which of the following is an instrumental value ?

- | | |
|---------------|---------------|
| a) Prosperity | b) Hard work |
| c) Pleasure | d) Happiness. |

ii) Which of the following is equivalent to burning of 1 kg. of Uranium ?

- | | |
|-----------------------|----------------------|
| a) 35 Tons of coal | b) 3500 Tons of coal |
| c) 35000 Tons of coal | d) none of these. |



vii) Stone tools were used by Homo Sapiens

- a) Million years ago
- b) ten thousand years ago
- c) one billion years ago
- d) one thousand years ago.

viii) Industrial revolution started in U.K. around

- a) 1630 AD b) 1730 AD
- c) 1780 AD d) 1870 AD.

ix) Technics and Civilisation was written by

- a) Jacques Ellul b) Lewis Mumford
- c) Martin Heidegger d) Langdon Winner.

x) Industrial Revolution started with

- a) James Watt's Steam Engine
- b) Spinning Jenny
- c) Mechanical Clock
- d) Factory System.



- xi) Schumachers Appropriate Technology Movement advocates
- a) steady increasing production
 - b) scaling down the pursuit of economic growth
 - c) growth oriented labour-intensive technologies
 - d) steady economic growth but decreasing consumption.
- xii) ISO 14000 is
- a) Environmental Management Standard
 - b) Product Quality Control
 - c) Product Safety Standard
 - d) None of these.
- xiii) Appropriate technology is most commonly discussed in its relationship to
- a) Economic development and as an alternative to transfers of capital-intensive technology from industrialized nations to developing countries
 - b) Economic development and as an alternative to transfers industrial goods from industrialized nations to developing countries
 - c) Technological development and as an alternative to transfers industrial goods from industrialized nations to developing countries.
 - d) None of these.

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GROUP – B

(Short Answer Type Questions)

Answer any *three* of the following.

3 × 5 = 15

2. Explain the meaning of environmental ethics and discuss its relevance to Eco-friendly Technologies.
3. What is economic growth ? What do you understand by limits to growth ?
4. Briefly discuss how Professional Ethics can be maintained by an Engineer in an Industry.
5. Discuss briefly about the value crisis in contemporary Indian Society.
6. What do you mean by Sustainable Development ? What kind of strategies should be adopted for sustainable development of a developing economy ?



GROUP – C

(Long Answer Type Questions)

Answer any *three* of the following. $3 \times 15 = 45$

7. What do you mean by "sustainable development" ? What are the characteristics of a sustainable society ? What is the role of appropriate technology in attaining sustainable development ? What is eco-friendly technology ? Discuss with an appropriate example in India.
8. State briefly the need for moving towards various forms of renewable energy. What do you mean by environmental ethics ? State the different issues related to environmental ethics. Give examples.
9.
 - a) What is appropriate technology ? What is your idea about the nuclear threat to the world that emerges from arms race ?
 - b) What are the problems of technology transfer in Indian educational institutions ?
10. Define code of 'Professional Ethics'. Explain some of the universally accepted codes of professional ethics. Discuss how engineering profession is guided by such codes. How do you feel a professional should deal with the conflicts between individual and corporate/business ethics ?

$2 + 4 + 3 + 6$



11. Write notes on any *three* of the following :

- i) Social audits.
- ii) Canons of ethics
- iii) Human centered technology
- iv) Industrial safety regulations
- v) Value system of an engineer
- vi) Geo-thermal energy.

12. Describe the salient features of the philosophy propounded by Lewis Mumford about the nature of technology growth. State his view on British Industrial Revolution.

