

Name :

Roll No. :

Invigilator's Signature :

**CS/B.Tech(ME/PE/AUE)/SEM-7/HU(PE)-701/2009-10
2009**

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.*

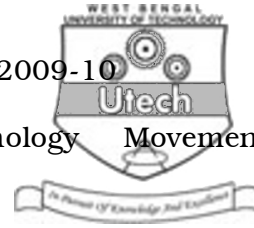
GROUP – A

(Multiple Choice Type Questions)

1. Choose the correct alternatives for the following :

10 ∞ 1 = 10

- i) By 2050 world population is projected to grow to
 - a) 8·7 billion
 - b) 8·9 billion
 - c) 8·6 billion
 - d) 8·8 billion.
- ii) According to the law of conservation of energy, energy cannot be
 - a) transformed
 - b) transported
 - c) destroyed
 - d) none of these.
- iii) Acid rain is caused by the combustion of
 - a) nuclear wastes
 - b) acidic chemicals
 - c) fossil fuels
 - d) solid wastes.



- iv) Schumacher's Appropriate Technology Movement advocates
- a) steadily increasing production
 - b) scaling down the pursuit of economic growth
 - c) growth-oriented labour-intensive technologies
 - d) steady economic growth but decreasing consumption.
- v) Ethical engineers are responsible
- a) to their employers only
 - b) to the society only
 - c) to their co-professionals only
 - d) to all the three.
- vi) The book "Technics and civilization" was written by
- a) Bertrand Russell b) E.F. Schumacher
 - c) Lewis Mumford d) A.P.J. Abdul Kalam.
- vii) Assembly Line are of
- a) four types b) two types
 - c) six types d) eight types.
- viii) While destroying ozone molecules CFC gases remain in stratosphere for
- a) 80 to 100 years b) 90 to 120 years
 - c) 75 to 130 years d) 100 to 150 years.



ix) Atmospheric concentration of CO₂ causes

- a) heavy rainfall b) acid rain
- c) rise in temperature d) fall in temperature.

x) The first atom bomb was dropped on

- a) Nagasaki b) Kobe
- c) Tokyo d) Hiroshima.

GROUP – B

(Short Answer Type Questions)

Answer any *three* of the following. 3 ∞ 5 = 15

2. Elaborate the codes of conduct that should be maintained at workplace.
3. Explain how the following play a part in inculcating ethics in individuals :
 - a) Culture
 - b) Law.
4. Explain how ethics and the study of ethics form an integral part of the engineering profession.
5. Discuss the role played by the following in environmental degradation and pollution :
 - i) Deforestation
 - ii) Population Explosion.
6. Enumerate the economic factors that contribute to the growth process of a country.



GROUP – C

(Long Answer Type Questions)

Answer any *three* of the following.

$3 \times 15 = 45$

7. How is technology assessment related with technology transfer ? What do you mean by appropriate technology and the ways of acquiring right type of technology ? 7 + 8
8. Discuss the issues on environmental ethics and point out how pollution is destroying ecological balances giving examples. Point out in brief :
 - i) the means to protect civilization from natural calamities and saving of natural resources
 - ii) crisis planning and management at local and national level. 5 + 5 + 5
9. Discuss various issues on code of ethics of engineers. What is professional ethics ? How is it related with workplace responsibility ? Discuss briefly.
10. Discuss the principle ways related to risks and safety ? Suggest the various means to exit from disasters like nuclear disasters of Chernobyl or Bhopal gas tragedy ? 5 + 10
11. Write short notes on any *two* of the following : $2 \times 7 \frac{1}{2}$
 - a) Sustainable Development
 - b) Whistle blowing and its ethical justification.
 - c) Business demands and professionals ideals.
 - d) The Report of Club of Rome.

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