



ENGINEERING & MANAGEMENT EXAMINATIONS, JUNE - 2009
ENVIRONMENT AND ECOLOGY
SEMESTER - 4

Time : 3 Hours]

[Full Marks : 70

GROUP - A

(Multiple Choice Type Questions)

1. Choose the correct alternatives for the following : 10 × 1 = 10

i) The most potentially renewable energy resource is

- | | |
|-----------------|-------------|
| a) sunlight | b) wind |
| c) tidal energy | d) biomass. |

ii) The causes of eutrophication is

- | | |
|--------------------------|------------------------------------|
| a) increase of pathogens | b) increase of COD |
| c) increase of BOD | d) increase of algal productivity. |

iii) Pedology is related to

- | | |
|----------|----------|
| a) sun | b) soil |
| c) noise | d) home. |

iv) 'Montreal Protocol' is related to

- | | |
|--------------------|---------------------|
| a) water pollution | b) air pollution |
| c) land pollution | d) noise pollution. |

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v) Blue baby syndrome is related to

- a) nitrate
- b) sulphate
- c) phosphate
- d) carbonate.

vi) Which of the following is a denitrifying bacteria ?

- a) *Rhizobium*
- b) *Nitrobacter*
- c) *Pseudomonas*
- d) *Anabaena*.

vii) Minamata disease is associated with pollution.

- a) Hg
- b) Cd
- c) As
- d) Pb.

viii) Energy flow of an Ecosystem is

- a) Unidirectional
- b) Bidirectional
- c) Cyclic
- d) None of these.

ix) The temperature range of troposphere is

- a) - 2° to - 92°C
- b) 15° to - 56°C
- c) - 56° to 2°C
- d) - 92° to 1200°C.

x) ESP is

- a) Electrostatic precipitator
- b) Electrostatic producer
- c) Electron source precipitator
- d) Electrostatic production.

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**GROUP - B****(Short Answer Type Questions)**Answer any *three* of the following.

3 × 5 = 15

2. Give an idea of formation of Acid Rain. Mention any three harmful effects of it. 2 + 3
3. How do you give an idea of Environmental Impact Assessment ?
4. Analyse the various methods of disposal of solid wastes.
5. Write down the effects of noise pollution on health.
6. Distinguish between sulphurous smog and photochemical smog.

GROUP - C**(Long Answer Type Questions)**Answer any *three* of the following.

3 × 15 = 45

7.
 - a) What is greenhouse effect ? Explain with the help of neat diagram.
 - b) State the different greenhouse gases and sources.
 - c) What are the different effects of greenhouse gases ? 6 + 4 + 5
8.
 - a) Mention the sources of ground water pollution.
 - b) Explain with the help of a neat diagram, the waste water treatment.
 - c) What is biological oxygen demand and why is it less than the value of theoretical oxygen demand ? 3 + 8 + 4
9.
 - a) What are the factors governing the impact of air pollution on human body ?
 - b) What are the major toxic trace metals present in particulate matter ? Indicate their sources and effect on human health.
 - c) Explain the effect of carbon monoxide and hydrocarbon on human health.
 - d) Indicate both the critical and chronic effects of arsenic, lead and ionized radiation on animals. 2 + 4 + 3 + 6



10. a) Define noise pollution.
- b) Mention the sources of noise pollution.
- c) Explain the various noise control methods at its source, path as well as receiving end. 2 + 4 + 9
11. Write notes on any two of the following : 2 × 7 $\frac{1}{2}$
- a) Filter Bag Unit for controlling Air Pollution.
- b) Food chain & Food web
- c) Montreal Protocol
- d) Renewable energy source.

END