



Name :

Roll No. :

Invigilator's Signature :

CS/BOPTM/SEM-2/BO-204/2013

2013

ENVIRONMENT AND ECOLOGY

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 answers for any *ten* of the following :

10 × 1 = 10

- i) Stone cancer of Taj is caused by
 - a) Smog
 - b) UV ray
 - c) Acid rain
 - d) CFC.
- ii) Aerosol is released by
 - a) Industries
 - b) Supersonic jets
 - c) Automobiles
 - d) Fertilizers.
- iii) Which of the following is the main factor of water pollution ?
 - a) Smoke
 - b) Ammonia
 - c) Detergents
 - d) Industrial wastes.
- iv) BOD means
 - a) Biological oxygen demand
 - b) Biochemical oxygen demand
 - c) Biggest oxygen demand
 - d) Bio oxygen dissolved.

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[Turn over



- v) Troposphere is distributed above the earth surface from
- a) 0 – 11 km b) 0 – 12 km
c) 0 – 8 km d) 0 – 6 km.
- vi) Air pollutant which reduces oxygen carrying capacity of blood is
- a) Ammonia b) Hydrocarbon
c) Hydrogen sulphide d) Carbon monoxide
- vii) Extraction of minerals and other materials from the earth's crust for human use is known as
- a) Agriculture b) Mining
c) Industrialization d) Grazing.
- viii) Tinnitis is a disease caused due to
- a) Water pollution b) Land pollution
c) Air pollution d) Sound pollution.
- ix) Which one of the following is the intensity level of noise ?
- a) centimetre b) decibel
c) newton d) watt.
- x) Cadmium poisoning causes
- a) Black food disease b) Itai itai disease
c) Lung disease d) None of these.
- xi) The region closest to earth surface is
- a) Stratosphere b) Troposphere
c) Mesosphere d) Thermosphere.
- xii) Which one of the following is not an air pollutant ?
- a) O₃ b) SO₂
c) H₂S d) H₂ .
- xiii) Maximum concentration of ozone is present in
- a) Stratosphere b) Mesosphere
c) Troposphere d) Thermosphere.

**GROUP – B****(Short Answer Type Questions)**

Answer any *three* of the following. $3 \times 5 = 15$

2. a) Write down the main components of the environment.
b) What are the basic changes that occurred due to human activities ? $2 + 3$
3. a) What is lapse rate ? What do you mean by inversion condition of the atmosphere ?
b) A sample of air analysed at 20°C and 1.0 atmospheric pressure contains 10 ppm of CO. Determine equivalent of CO-concentration in μgm^3 . $3 + 2$
4. a) Explain the importance of environmental studies.
b) Explain the ways to create public awareness about the environmental studies. $2 + 3$
5. State the harmful effects of ozone layer depletion.
6. Define food chain. Describe carbon cycle with a diagram. $1 + 4$

GROUP – C**(Long Answer Type Questions)**

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

7. Describe various components of ecosystem with example. How is energy transmitted through the biotic components of a grassland ecosystem ? $8 + 7$

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8. Discuss nitrogen cycle with appropriate diagram. Ozone acts as an pollutant in atmosphere and as an umbrella in stratosphere. Explain. 8 + 7
9. Explain the role of different greenhouse gases to increase the temperature of earth. What can we do to combat global warming ? 10 + 5
10. What are the impacts of surface water pollution ? What are the steps to be taken to control noise pollution ? 8 + 7
11. Write down the methods of dispersion of pollutants within the atmosphere. Discuss the collection and disposal methods of municipal solid waste. 8 + 7
12. Write short notes on any three of the following : 3 × 5
- a) Eutrophication and its control
 - b) Acid rain
 - c) Electrostatic precipitator
 - d) Rain water harvesting
 - d) Forest (Conservation) Act, 1980.