	Utech
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Invigilator's Signature :	

CS/BTTM/SEM-4/TTM-403/2013

2013

ENVIRONMENT & 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 alternatives for any ten of the following:

 $10 \times 1 = 10$

- i) The total fresh water reserve of the earth is about
 - a) 2.2%

b) 0.5%

c) 2.7%

- d) 0.0001%.
- ii) Most poisonous pollutant in water is
 - a) zinc

- b) phosphate
- c) arsenic
- d) carbon dioxide.
- iii) Which of the following is the correct sequence of the food chain?
 - a) Grass \rightarrow insect \rightarrow bird \rightarrow snake
 - b) Grass \rightarrow snake \rightarrow insect \rightarrow deer
 - c) Bacteria \rightarrow grass \rightarrow deer \rightarrow buffalo
 - d) Grass \rightarrow wolf \rightarrow deer \rightarrow buffalo.

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- iv) Snowfall is measured in
 - a) relative units
 - b) inches or centimetres falling per unit of time
 - c) the number of grams of water molecules per kilogram
 - d) none of these.
- v) The animal communities living in a desert are called
 - a) biome

- b) biotic factor
- c) biomass
- d) food web.
- vi) Which of the following agencies has laid down the standards for the control of pollution of air, water and noise?
 - a) Central Pollution Control Board
 - b) Central Pollution Control Tribunal
 - c) Central Pollution Control Agency
 - d) None of these.
- vii) Global warming will lead to which of the following situations?
 - a) Massive extinction of the species
 - b) Increase of the greenhouse gas emission
 - c) Collapse of biological and ecological system
 - d) All of these.
- viii) The lowest temperature in the atmosphere is
 - a) 90°C

b) - 100°C

c) - 50°C

- d) none of these.
- ix) Sanctuaries are established to
 - a) conduct research on biodiversity
 - b) conduct ecotourism on wildlife
 - c) develop commercial tree plantation
 - d) protect animal.



- x) Which of the following is a non-renewable resource ?
 - a) Coal

- b) Forests
- c) Wildlife
- d) Water.
- xi) The term 'natural environment' is the sum of
 - a) nature, society and environment
 - b) man, nature and society
 - c) man, nature and environment
 - d) all of these.
- xii) Which of the following is not a fossil fuel?
 - a) Petro

b) Natural gas

c) Coal

d) Uranium.

GROUP - B

(Short Answer Type Questions)

Answer any *three* of the following

 $3 \times 5 = 15$

- 2. Briefly explain the relationship between pollution and population.
- 3. Write a brief outline of Environmental Protection Act, 1986.
- 4. What is acid rain? What are the effects of acid rain? 2 + 3
- 5. Describe the role of Environmental Impact Assessment (EIA) in society. What are the goals of EIA? 2 + 3
- 6. What is protochemical SMOG ? Describe the probable mechanism of smog forming reactions. 2 + 3

GROUP - C

(Long Answer Type Questions)

Answer any three of the following.

 $3 \times 15 = 45$

- 7. Define ecology. Explain the ecological balance and its consequences of change. Define greenhouse effect. 2 + 8 + 5
- 8. Explain the harmful effects of noise pollution. Explain the process of noise pollution control. 10 + 5

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- 9. What is Hydrosphere ? Describe Hydrological cycle with diagram. Suggest some measures for the conservation of water. 2 + 7 + 6
- 10. What are the source of wastes being generated in the cities? Explain solid waste management. What are the causes of solid waste pollution? 2 + 10 + 3
- 11. a) What is Ozone depletion?
 - b) Discuss the role of CFCs on Ozone hole formation and photochemistry of Ozone in the stratosphere.
 - c) What are the harmful effects of depleted Ozone layer?
 - d) Indicate various areas where CFCs have been used.
 - e) Name the substitutes of CFCs. 2 + 5 + 4 + 2 + 2
- 12. Write short notes on any *three* of the following: 3×5
 - a) Activated sludge process
 - b) Bag house
 - c) Catalytic converter
 - d) Water Pollution Control Act, 1974.

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