



**MAULANA ABUL KALAM AZAD UNIVERSITY OF
TECHNOLOGY, WEST BENGAL**

Paper Code : HU(BCA)-401

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 alternatives for any ten of the following : 10 × 1 = 10
- i) The atmospheric layer adjacent to the earth's surface is
- a) Stratosphere b) Ozonosphere
c) Troposphere d) Lithosphere.
- ii) Which among the following is detritivore in ecosystem ?
- a) Green plant b) Earthworm
c) Lion d) Cow.

- iii) What is the definition of a community ?
- a) Two or more species of organisms in their environment
 - b) The interaction between living organisms and their environment
 - c) All the organisms of the same or closely-related species
 - d) Two or more populations of organisms.
- iv) Lapse rate refers to the rate at which
- a) population increases in area with increase in temperature
 - b) temperature decreases with increase in elevation
 - c) temperature decreases with decrease in elevation
 - d) both (b) and (c).
- v) Which one is a primary pollutant ?
- a) Smoke
 - b) Carbone monoxide
 - c) PAN
 - d) Carbon dioxide.
- vi) The main component of photochemical smog is
- a) water vapour
 - b) sulphur dioxide
 - c) oxides of nitrogen
 - d) all of these.
- vii) "Bhopal Gas Tragedy" was happened on
- a) 9th June
 - b) 3rd December
 - c) 3rd November
 - d) 12th December.
- viii) The skin cancer is caused by
- a) the Greenhouse effect
 - b) UV Exposures
 - c) Ozone hole
 - d) Acid rain.

GROUP - C

(Long Answer Type Questions)

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

7. Write down the procedure with derivation of equation of seeded BOD test. Why is BOD test conducted for 5 days ? 12 + 3

8. What are the segments of atmosphere ? In which layer trailing of jet can be found ? What are primary and secondary Air pollutants ? 10 + 2 + 3

9. Write down the primary, secondary and tertiary treatment of municipal sewage water with proper flow diagram. What are catalytic converter and fluidized bed combustion ? (3 + 3 + 3) + (3 + 3)

10. What are the full forms of :

- i) IUCN
- ii) PAN
- iii) ODS
- iv) MIC
- v) WWF.

Why Lead (Pb) is considered as heavy metal ? What are the sources of Lead ? What are the adverse effects of Lead on human health ? How lead poisoning can be controlled ? What are the harmful effects of Arsenic on human health ? (5 × 1) + 1 + 1 + 3 + 3 + 2

11. Write short notes on any *three* of the following : 3×5

- a) Ozone depletion ✓
- b) Acid rain ✓
- c) Hydrological cycle ✓
- d) Air pollution control techniques
- e) Noise pollution control.