



44559

**BRAINWARE UNIVERSITY**

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Term End Examination 2025-2026**Programme – B.Sc.(Ag)-Hons-2025****Course Name – Environmental Studies and Disaster Management****Course Code - VAC27001(T)****(Semester II)****Full Marks : 40****Time : 2:0 Hours**

[The figure in the margin indicates full marks. Candidates are required to give their answers in their own words as far as practicable.]

Group-A

(Multiple Choice Type Question)

1 x 10=10

1. Choose the correct alternative from the following :

- (i) The term 'environment' is derived from which language?
 - a) Latin
 - b) Greek
 - c) French
 - d) German
- (ii) Which of the following is a non-renewable resource?
 - a) Solar energy
 - b) Wind energy
 - c) Coal
 - d) Forests
- (iii) A region has high endemism but has lost 75 % of its original habitat. It qualifies to be labelled a:
 - a) Biosphere reserve
 - b) Biodiversity hotspot
 - c) Wildlife sanctuary
 - d) Ramsar site
- (iv) Which one of the following is the correct ascending order of Earth's atmospheric layers?
 - a) Troposphere → Mesosphere → Stratosphere → Thermosphere
 - b) Troposphere → Stratosphere → Mesosphere → Thermosphere
 - c) Stratosphere → Troposphere → Mesosphere → Thermosphere
 - d) Mesosphere → Troposphere → Stratosphere → Thermosphere
- (v) which one is the first global agreement to protect the ozone layer?
 - a) Kyoto Protocol
 - b) Paris Agreement
 - c) Montreal Protocol
 - d) Ramsar Convention
- (vi) Gene pool refers to which of the following statement?
 - a) All genes in an ecosystem
 - b) All genes present in a population
 - c) All chromosomes of a single organism
 - d) All proteins coded by DNA
- (vii) Contrast composting and pyrolysis.
 - a) Both are thermal
 - b) Composting is biological, pyrolysis is thermal
 - c) Both produce biogas
 - d) Both need oxygen

- (viii) Evaluate the provided statements and determine which one most correctly describes an ecosystem?
- a) Only living organisms interacting b) Only physical factors of an area
c) Dynamic interaction of biotic & abiotic components d) Static collection of species
- (ix) Evaluate the structure of a grassland ecosystem pyramid and justify which trophic level demonstrates the largest biomass.
- a) Tertiary consumers b) Secondary consumers
c) Primary consumers d) Producers
- (x) Analyze the given sentences and determine which one accurately summarizes the energy flow rule in ecosystems.
- a) 100 % energy transfers to next level b) Energy is recycled within food-web
c) Only 10 % energy passes to next trophic level d) Energy increases at higher levels

Group-B

(Short Answer Type Questions)

2.5 x
10=25

2. Differentiate between primary and secondary air pollutants with examples. (2.5)
3. Determine how energy flow in an ecosystem follows the laws of thermodynamics. (2.5)
4. Compare the ecological impact of shifting cultivation vs. commercial logging. (2.5)
5. Classify the types of biogeochemical cycles and give one example of each. (2.5)
6. Elaborate the term OTEC (Ocean Thermal Energy Conversion). (2.5)
7. Recall one socio-economic cause that accelerates deforestation in developing countries and define its impact on forest ecosystems. (2.5)
8. Interpret the significance of a high Biological Oxygen Demand (BOD) value in river water. (2.5)
9. What is biodiversity? (2.5)
10. What is the role of decomposers in an ecosystem? (2.5)
11. Explain why the Western Ghats are recognised as a biodiversity hotspot. (2.5)

OR

Explain the concept of ecological pyramids. (2.5)

Group-C

(Long Answer Type Questions)

5 x 1=5

12. Evaluate the effectiveness of biological control agents in managing the Lantana invasion in Nilgiri Biosphere Reserve. (5)

OR

Compare the advantages and disadvantages of solar energy versus fossil fuels. (5)

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