

M. SC. ZOOLOGY
SECOND SEMESTER
ECOLOGY & ENVIRONMENTAL SCIENCE
MSZ - 203

(Use Separate Answer Scripts for Objective & Descriptive)

Duration : 3 hrs.

Full Marks : 70

(**PART-A : Objective**)

Time : 20 min.

Marks : 20

Choose the correct answer from the following:

1 × 20 = 20

- The term ecosystem development was termed by
 - Glison
 - Odum
 - Haeckel
 - V.E Shelford
- In heterotrophic succession, in young stage the P/R ratio is
 - Greater than 1
 - Less than 1
 - Equal to 1
 - None of the above
- Succession that occurs due to the changes in the earth's surface is known as
 - Geological succession
 - Biotic succession
 - Allogenic succession
 - Physiographic succession
- A population which has more or less equal number of young and middle aged individuals is represented by
 - Broad based pyramid
 - Urn shaped pyramid
 - Bell shaped pyramid
 - Round shaped pyramid
- The species which may or may not be dominant but help in the survival of other species in a community are called
 - Umbrella species
 - Keystone species
 - Flagship species
 - All of the above
- The sequence of communities showing a gradual change in composition is called
 - Equilibrium community
 - Continuum community
 - Organismic community
 - Individualistic community
- Write the correct name of the wildlife act of India.
 - The Wild Life Protection Act, 1972
 - The Wild Life Protection Act, 1973
 - The Wild Life (Protection) Act, 1973
 - None
- Who publishes the Red Data Book?
 - CITES
 - IUCN
 - WWF
 - None

9. Bears are traded mainly for-
- | | |
|-----------------|---------|
| a. Skin | b. Nail |
| c. Gall bladder | d. None |

10. In which year, the IUCN was established?
- | | |
|---------|---------|
| a. 1947 | b. 1948 |
| c. 1949 | d. None |

11. Shahtoosh shawl is made from -
- | | |
|---------------|--------------|
| a. Tiger Skin | b. Bear Skin |
| c. Chiru Skin | d. None |

12. Which state of India does not follow the Indian wildlife act?
- | | |
|----------------------|----------|
| a. Andaman & Nicobar | b. Delhi |
| c. Pondicherry | d. None |

13. Which section of the Indian wildlife act deals with illegal hunting?
- | | |
|---------------|---------------|
| a. Section-9 | b. Section-11 |
| c. Section-12 | d. None |

14. Mycoremediation is type of
- | | |
|--------------------------|-----------------------------|
| a. Fungal bioremediation | b. Bacterial bioremediation |
| c. Plant bioremediation | d. Soil bioremediation |

15. The process in which a harmful chemical enters the food chain and gets concentrated at each level in the food chain is called
- | | |
|---------------------|----------------------|
| a. Concentration | b. Bioaccumulation |
| c. Biomagnification | d. None of the these |

16. Eutrophication in aquatic water body is due to the excess loading of
- | | |
|--------------------------|-----------------------|
| a. Sulphur & calcium | b. Silica & magnesium |
| c. Nitrogen & phosphorus | d. Manganese & boron |

17. Arctic Haze over the Arctic atmosphere and it is composed of
- | | |
|-----------------------------------|---------------------------------------|
| a. Hexachlorobenzene (HCB) | b. Solid - liquid compounds of Carbon |
| c. Sulphur from coal and Aerosols | d. None of these |

18. PAHs are
- | | |
|--------------------|---------------------------|
| a. Bioremediators | b. Petroleum contaminants |
| c. Phytoremediants | d. None of these |

19. Genotoxicity effects are caused due to
- | | |
|--------------------|-----------------------|
| a. Sharps | b. Pathological waste |
| c. Cytotoxic drugs | d. All of the these |

20. Agricultural waste such as organic waste are
- | | |
|-------------------------------------|------------------|
| a. Blades and Syringes | b. Chemicals |
| c. Food Waste, Sand, wood and straw | d. None of these |

(PART-B : Descriptive)

Time : 2 hrs. 40 min.

Marks : 50

[Answer question no.1 & any four (4) from the rest]

- | | |
|---|--------------|
| 1. Explain Leibeg's law of minimum and Shelford's law of tolerance.
Explain the significance of the limiting factors. | 4+4+2
=10 |
| 2. What are the different types of ecosystems? Describe briefly about the features of aquatic and terrestrial ecosystems. | 2+4+4
=10 |
| 3. Define the term Bioremediation. How Bioremediation is helpful for purification of toxic metals. | 2+8=10 |
| 4. What is Wildlife Monitoring? Why it is important for Wildlife? | 5+5=10 |
| 5. Write short notes on:
a. Ecotone
b. Edge effect | 5+5=10 |
| 6. What are the different categories of species classified by the IUCN? Write a note on the criteria of such classification of species. | 5+5=10 |
| 7. What is productivity? Explain about various types of productivity. | 3+7=10 |
| 8. Discuss about the various steps to control Acidification. | 10 |

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