

**M.Sc. ZOOLOGY**  
**FOURTH SEMESTER**  
**ANIMAL ECOLOGY & WILDLIFE BIOLOGY-II**  
**MSZ-402 B**

(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:*

*1x20=20*

1. A home range of an animal is-
  - a. Actively defended
  - b. Not actively defended
  - c. Share themselves
  - d. None
2. Who is the longest mammal migrant?
  - a. Blue whale
  - b. Humpback whale
  - c. Both
  - d. None
3. Polygynandry is associated with-
  - a. Multi-male group
  - b. Multi-female group
  - c. Both
  - d. None
4. Cyclo-zoonoses requires-
  - a. No host
  - b. One host
  - c. >1 host
  - d. None
5. Which one of the following indirect sign is used to estimate the elephant population size?
  - a. Feeding sign
  - b. Track
  - c. Dung
  - d. None
6. Toxoplasmosis is a disorders in-
  - a. Circulatory system
  - b. Nervous system
  - c. Respiratory system
  - d. All
7. Which of the following software are widely used in GIS?
  - a. Arc GIS
  - b. Arc View
  - c. ERDUS
  - d. All
8. Transect survey method is used for sampling-
  - a. Prey species
  - b. Predator species
  - c. Both
  - d. None
9. Bio-telemetry helps in-
  - a. Tracking collared animal
  - b. Measured the home range size
  - c. Both
  - d. None
10. How many species of elephant are there in the world?
  - a. Two
  - b. Three
  - c. Four
  - d. None

11. Behavioral ecology refers to-
  - a. Behavior of an organism.
  - b. Interaction of an organism with environment.
  - c. Animal behavior due to ecological pressure.
  - d. None.
12. Biological indicators are mainly used to indicate-
  - a. Vegetation covers in biomes
  - b. The diversity of a habitat
  - c. Direct measures of ecosystem condition
  - d. The richness of species in an area
13. The gas that contribute to global cooling rather than global warming is-
  - a. Nitrous oxide
  - b. Chlorofluorocarbons
  - c. Methane
  - d. Aerosols and CO<sub>2</sub>
14. Biodiversity is highest in-
  - a. Alpine meadows
  - b. Deciduous monsoon forests
  - c. Tropical evergreen forest
  - d. Equatorial forests
15. Environmental Impact Assessment (EIA) is mandatory under which one of the following India legislations?
  - a. Indian Forest Act.
  - b. Air (Prevention and Control of Pollution) Act.
  - c. Wildlife Protection Act, 1972.
  - d. Environment (Protection) Act, 1986.
16. Catadromous fishes moves from-
  - a. Freshwater to marine water
  - b. Marine to freshwater
  - c. Within a freshwater
  - d. Within a marine water
17. Ganga action plan was launched on-
  - a. 14<sup>th</sup> January 1986
  - b. 14<sup>th</sup> November 2000
  - c. 14<sup>th</sup> June 1978
  - d. None
18. In island biogeography theory, if there are two islands and one is closer to the mainland, the closer island would have-
  - a. A higher rate of immigration than the distant island.
  - b. A higher rate of extinction than the distant island.
  - c. Fewer species than the distant island.
  - d. A lower rate of extinction than the distant island.
19. Larger islands tend to support more species than smaller islands. This is because large islands have-
  - a. A lower rate of extinction
  - b. A lower rate of immigration
  - c. A higher rate of immigration
  - d. A higher rate of extinction
20. SMOG contains-
  - a. CO<sub>2</sub>, SO<sub>2</sub>, particulates etc.
  - b. Zinc, Argon, Krypton etc.
  - c. Lead, CO, N<sub>2</sub>O, K, particulates etc.
  - d. None

**( PART-B : Descriptive )**

Time : 2 hrs. 40 min.

Marks : 50

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

1. Write short notes on the following: 2.5x4=10
  - a) Zoonotic diseases.
  - b) Sacred grooves.
  - c) Kin selection.
  - d) Reciprocal altruism.
2. Define human-elephant conflict. Write the causes of human-elephant conflict. Also mention about some of the mitigation measures undertaken in India. 1+4+5=10
3. What do you mean by remote sensing? State the different types of remote sensors that are used. Enumerate some use of remote sensing in wildlife conservation. 2+4+4=10
4. Define the term communication. What are the different types of communication practiced by animals? Also write the functions of communication in wild animals. 1+6+3=10
5. What is Environmental Monitoring? Explain about Ground based environmental monitoring and management of environmental aspects. 3+3+4=10
6. Describe about the major steps involved in Environmental Impact Assessment processes. Also mention about the Screening techniques of EIA. 7+3=10
7. Mention about the different types of Island and their characteristics. Explain the works of Robert Mac Arthur & E.O. Wilson on Island Biogeography. 5+5=10
8. Write short notes: 5+5=10
  - a) Restoration Ecology.
  - b) Satellite based monitoring.

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