

## MSc Sem.-2 Examination

409

Life Science

May-2025

Time : 2-30 Hours]

[Max. Marks : 70

## Instructions:

All questions are compulsory.

Illustrate your answers with neat diagrams wherever necessary.

## Question - 1

Write the following

- i) Explain foraging behavior in detail with definition, types and examples. [07]
- ii) Define ecological behavior with its significance. [07]

OR

- i) Discuss the behavioural sensory world of animals and explain how different species use their senses to interact with their environment. Provide examples to support your answer. [07]
- ii) Discuss the genetic basis of behaviour. [07]

## Question - 2

Write the following

- i) Give a detailed difference between Innate behavior and Learned behavior. [07]
- ii) Describe Dominance as a Social Behavior [07]

OR

- i) Write different types of Human behavior in detail. [07]
- ii) Write a detailed description with examples of Morden application of Human ethology. [07]

## Question - 3

Write the following

- i) Describe adaptation and its various types? [07]
- ii) Define the habitat and types of habitats in detail? [07]

OR

- i) What is natural selection? Explain the types of natural selection [07]
- ii) What is genetic drift? What are the different types of genetic drift? [07]

## Question - 4

Write the following

- i) Describe the different fields of toxicology in details. [07]
- ii) Write the key principles of toxicology and explain Dose-Response Relationship in details. [07]

OR

- i) Define Geno toxicity and explain its molecular mechanisms. Give examples of air, water, and soil pollutants. [07]
- ii) Discuss the repeated dose 28-day oral toxicity study in rodents in detail. [07]

Question - 5

Attempt any seven out of twelve

[14]

- i) What is Clinical Toxicology?
  - ii) What is Total Dose?
  - iii) What is Bioavailability?
  - iv) Write different types of Dose?
  - v) Explain difference between primary consumers and secondary consumers.
  - vi) What is heredity, and how are genetic traits transmitted from parents to offspring?
  - vii) What are the differences between Mendelian and Non-Mendelian inheritance
  - viii) What is structural adaptation?
  - ix) What are the main preference habitat of organisms?
  - x) Birds migrating to warmer regions during winter, which type of adaptation?
  - xi) How do bees communicate with each other?
  - xii) What is the purpose of a bird's song?
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