

2025

ZOOLOGY — HONOURS

Paper : DSE-B-3

(Animal Behaviour and Chronobiology)

Full Marks : 50

The figures in the margin indicate full marks.

Candidates are required to give their answers in their own words as far as practicable.

Answer *question no. 1* and *any four* questions from the rest.

1. Answer *any five* questions : 2×5
 - (a) What is Zeitgeber?
 - (b) State the characteristic features of Eusocial insects.
 - (c) Mention the differences between Taxis and Kinesis.
 - (d) What is classical conditioning?
 - (e) Mention Hamilton's rule.
 - (f) State the differences between polygyny and polyandry.
 - (g) What do you mean by imprinting?
 - (h) What is Nuptial flight?
2.
 - (a) What is operant conditioning? Give example. State its significance.
 - (b) Distinguish between habituation and sensitization with suitable example.
 - (c) What is the difference between 'motivation and drive'? (2+1+2)+3+2
3.
 - (a) What specific role is played by sign stimulus in Fixed Action Pattern (FAP)? Elaborate with suitable example.
 - (b) Define the concept of Innate Releasing Mechanism (IRM).
 - (c) How does learning differ from instinct? (3+2)+2+3
4.
 - (a) What is reciprocal altruism? Explain with suitable example.
 - (b) What is sibling rivalry? Give an example and mention its significance. (2+3)+(2+1+2)
5.
 - (a) Mention nest building behaviour of five fishes.
 - (b) Comment on the endocrine control of bird migration.
 - (c) Discuss the adaptive features of biological clock. 5+3+2

Please Turn Over

6. (a) What is dance language hypothesis? Explain the dance phenomenon and its significance in honey bee.
- (b) What is the difference between Lunar and Tidal rhythm?
- (c) Mention the significance of sterile caste in termite colony. (2+3)+2+3
7. (a) What is parent offspring conflict? Describe 'reproductive fitness' and 'inclusive fitness'.
- (b) What do you mean by sexual dimorphism? Give one example.
- (c) Elaborate the concept of Sexual imprinting. (2+3)+2+3
8. Write short notes on : 2½×4
- (a) Male-male rivalry
- (b) Associative Learning
- (c) Kin selection
- (d) Geotaxis.
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