

2023

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) State the characteristic features of eusocial insects.
 - (b) What do you mean by Zugunruhe?
 - (c) What is thermotaxis?
 - (d) What do you mean by circadian rhythm? Give one example.
 - (e) What is polyandry? Give one example.
 - (f) Comment on classical conditioning.
 - (g) What do you mean by imprinting?
 - (h) Distinguish between orthokinesis and klinokinesis.
2. (a) What is operant conditioning? Give example. State its significance.
(b) Distinguish between habituation and sensitization with suitable example.
(c) What do you mean by zeitgeber? (2+1+2)+3+2
3. (a) How sign stimulus plays specific role in FAP? Describe with suitable example.
(b) Distinguish between endogenous and exogenous rhythms.
(c) Comment on role of pheromones in communication of honey bees. (3+2)+2+3
4. (a) Describe the nest building behaviour of *any five* fishes.
(b) What is sibling rivalry? Give example. Mention its significance. 5+(2+1+2)
5. (a) Comment on endocrine control of bird migration.
(b) What is reciprocal altruism? Explain with an example.
(c) What do you mean by stereotyped behaviour? 3+(2+3)+2

Please Turn Over

6. (a) Discuss the role of SCN in regulating biological rhythm. State its role in melatonin production.
(b) Comment on the concept of haplodiploidy in honey bee. (4+2)+4
7. (a) Describe parent offspring conflict with an example.
(b) What do you mean by entrainment?
(c) What do you mean by Sexual dimorphism? Give one example.
(d) What do you mean by an amplitude of biological rhythm? 4+2+2+2
8. Write short notes on : $2\frac{1}{2} \times 4$
(a) Coefficient of relatedness
(b) Male-male rivalry
(c) Associative learning
(d) Lunar and Tidal rhythms.
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