

## U.G. 6th Semester Examination - 2021

### ZOOLOGY

Course Code : BZOODSHC5

Course Title : Animal Behaviour and Chronobiology

Full Marks : 30

Time : 2 Hours

*The figures in the right-hand margin indicate marks.*

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

1. Answer any **ten** questions: 1×10=10
- a) Differentiate between iteroparity and semelparity.
  - b) What is 'phase shift' in the study of biological rhythm?
  - c) Explain chronobiology.
  - d) How will you identify an instinctive behaviour?
  - e) What is meant by the term 'amplitude' in the study of circadian rhythm?
  - f) Differentiate between active avoidance learning and passive avoidance learning.

[Turn over]

- g) What is altruistic behaviour?
- h) Define eusociality.
- i) What is associative learning?
- j) What is the significance of masking?
- k) What is the precursor of the hormone involved in maintaining biological rhythm?
- l) What do you mean by supernormal stimuli?
- m) Explain the term 'appetitive' behaviour.
- n) What is inclusive fitness?
- o) Explain the term 'consummatory behaviour'.

2. Answer any **five** questions: 2×5=10
- a) What is dance language hypothesis?
  - b) State Hamilton's rule on the coefficient of relatedness.
  - c) Comment on the role of supra-chiasmatic nucleus in maintenance of circadian rhythm.
  - d) What is byproduct mutualism?
  - e) What are proximate and ultimate cause of behaviour?
  - f) What do you mean by the term 'sexyson' behaviour?

- g) What is pheromone and give an example.
- h) 'Circadian rhythm is also regulated by external cues' – explain with an example.

3. Answer any **two** of the following:  $5 \times 2 = 10$

- a) Explain – 'learning is considered as a form of phenotypic plasticity'. What is good gene?

3+2

- b) Distinguish between communication and senses. Explain briefly about foraging behaviour of honey bees.

1+4

- c) 'Largeness of tail in a peacock ensures the honesty of the signal' – Justify the statement in context of handicap principle. How are coefficient of relatedness used to understand altruism?

3+2

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