

6112

4

- (b) Elaborate the different types of Orientation behaviour with suitable examples. (6)
6. (a) Why do animals migrate and how do they navigate their ways? Can the biological rhythm of animals be of any use while taking their migratory routes? (6)
- (b) Define Chronotherapy and state its significances. What are the importance methods employed in chronotherapy. (6)
7. Write short notes on any **three** of the following : (3×4=12)
- (i) Waggle dance of honey bee
- (ii) Courtship display
- (iii) Brood parasitism
- (iv) Sexual selection
- (v) Chronopharmacology

(200)

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[This question paper contains 4 printed pages.]

26.12.2024(M)

Your Roll No.....

Sr. No. of Question Paper : 6112

Unique Paper Code : 32237901

Name of the Paper : DSE-Animal Behaviour and Chronobiology

Name of the Course : **B.Sc. (Hons) Zoology (LOCF)**

Semester : V

Duration : 3 Hours

Maximum Marks : 75

Instructions for Candidates

1. Write your Roll No. on the top immediately on receipt of this question paper.
2. Attempt **five** questions in all including Question No. 1 which is compulsory.

1. (a) Define : (1×6=6)

- (i) Conditioned reflex
- (ii) Roosting
- (iii) Sign stimuli
- (iv) Altruism

P.T.O.

(v) Supernormal stimuli

(vi) Habituation

(b) Differentiate between the following (**any four**) :
(3×4=12)

(i) Innate and learnt behaviour

(ii) Operant Conditioning and Classical Conditioning

(iii) Solitary and Sub social

(iv) Taxis and Kinesis

(v) Hormones and Pheromones

(c) Give the important contribution of the following scientists :
(1×4=4)

(i) Konrad Lorenz

(ii) Skinner

(iii) Michener

(iv) R.A. Fisher

(d) Justify the following statements : (2½×2=5)

(i) Reciprocal altruism is really a special kind of mutualism.

(ii) Biological clocks are entrained by Zeitgebers.

2. (a) What are the silent features of a eusocial insect? Describe in detail that honey bees are eusocial in nature. (6)

(b) Define fixed action pattern by giving a relevant example. How is the fixed action pattern differing from an imprinted behaviour? (6)

3. (a) What is Zeitgeber? Explain how is the Zeitgeber responsible for the entrainment? (6)

(b) Who was Karl von Frisch? What were his discoveries as regards to the returning honeybee foragers to communicate waiting potential foragers? (6)

4. (a) What are the adaptive significances of courtship rituals? Describe the courtship rituals in three spined stickle back fishes and the fruit flies. (6)

(b) What is altruism? How is this behaviour assessed by the Kin Selection theory? (6)

5. (a) What do you know about the four questions on ethology? List the questions and describe their features. (6)