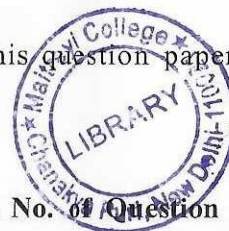


5. (a) What are courtship rituals? Discuss the steps involve in the courtship rituals and their relevances by giving appropriate examples. (6)
- (b) Define entrainment. With the help of mi able examples, explain the exogenous and endogenous rhythms. (6)
6. (a) Define chronobiology. Discuss the factors responsible for regulating the biological clock. (6)
- (b) What is chronotherapy? What are the different methods of chronotherapy? Explain briefly about its advantages over traditional forms of therapy. (6)
7. Write short notes on **any three** of the following : (3×4=12)
- (i) Suprachiasmatic nuclei
 - (ii) Sexual conflict in parental care
 - (iii) Communication
 - (iv) Chronopharmacology

[This question paper contains 4 printed pages.]



Your Roll No.....

05.01.2024(M)
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Sr. No. of Question Paper : 4612

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) Ethology
 - (ii) Zeitgeber
 - (iii) Code breaker

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- (iv) Imprinting
- (v) infanticide
- (vi) Habituation

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

- (i) Dominance and Territoriality
- (ii) Ultradian and Infradian rhythm
- (iii) Altricial and Precocial
- (iv) Habituation and Sensitization
- (v) Allomones and kairomones

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

- (i) Franz Halberg
- (ii) Niko Tinbergen
- (iii) Karl von Frisch
- (iv) W.D. Hamilton

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

- (i) Seasonal migration of animals is controlled by biological clocks.
- (ii) Cooperative behaviour in vampire bats illustrates reciprocal altruism.

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2. (a) How Instrumental conditioning is different from classical conditioning. Describe briefly the Pavlov's experiment and its importance in acquisition of character. (6)
- (b) How does honeybee use sun as directional cues while foraging? Describe the round dance and the tail wagging dances of honey bees and their significances. (6)
3. (a) Explain 'reflex' and 'reflex arc'. Draw a labelled diagram of a reflex arc/pathway. (6)
- (b) "*In many animal species, the male is the showier sex*". Discuss this statement in relation to sexual behaviour. Use examples of named animal species to illustrate your answer. (6)
4. (a) Enumerate the characteristic features of a group to be called as social animal and name the 3 grades of sociality in animals. Explain about the eusocial characters of honeybee society. (6)
- (b) What is altruism and kin-selection behaviour? Describe with suitable example, how these behaviours are important in evolutionary aspects. (6)

P.T.O.