

This question paper contains 3 printed pages]

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S. No. of Question Paper : 1174

Unique Paper Code : 6793010009

Name of the Paper : Ethology (DSE)

Name of the Course : B.Sc. (H) Biological Sciences (NEP) 2024

Semester : V

Duration : 2 Hours

Maximum Marks : 60

(Write your Roll No. on the top immediately on receipt of this question paper.)

Attempt *four* questions in all.

Question No. 1 is compulsory.

All questions carry equal marks.

All parts of a question should be answered together.

1. (a) Define the following :

1×5=5

(i) Inclusive fitness

(ii) Code breakers

(iii) Reciprocal altruism

(iv) Territoriality

(v) Habituation.

P.T.O.

(b) Distinguish between : 2×3=6

(i) Emotional quotient and Intelligence quotient

(ii) Polyethism and Polyphenism

(iii) Taxis and Kinesis

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

(i) Konrad Lorenz

(ii) Nikolaas Tinbergen

(iii) E.O. Wilson

(iv) R. A. Fisher

2. (a) Describe the principles of classical and operant conditioning providing examples of each process. Discuss how these processes contribute to behaviour modification and learning in animals ? 10

(b) Emotional intelligence provides a distinct advantage in the workplace, enhancing both personal performance and team dynamics. Discuss. 5

3. (a) What are the characteristics of eusociality ? Describe Social organization in honey bees. 10

(b) What is altruism ? With suitable example describe how Hamilton's rule provides the evolutionary significance of altruism. 5

4. (a) Elaborate the different types of orientation behaviour with suitable examples.

(b) What are the characteristics of reflexes ? Explain the various types of reflexes. 7.5×2=15

5. (a) Elucidate the role of intersexual and intrasexual selection in sexual behaviour. Explain how they influence development of reproductive strategies in various species by giving suitable examples. 10
- (b) What do you understand about sexual dimorphism ? Explain the theories which explain the male ornamentation and female mating choice ? 5
6. Write short notes on any *three* of the following : 3×5=15
- (i) Courtship behaviour in 3-spine stickleback
 - (ii) FAP
 - (iii) Infanticide
 - (iv) Experiment to prove dance as a mode of communication.