

This question paper contains 3 printed pages]

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S. No. of Question Paper : 5679

Unique Paper Code : 2232012403

Name of the Paper : DSC : Animal Behaviour

Name of the Course : B.Sc. (H) Zoology

Semester : IV (NEP-UGCF)

Duration : 2 Hours

Maximum Marks : 60

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

Attempt any four questions in all including Question No. 1

which is compulsory.

1. (a) Define any four of the following terms :

4×1=4

- (i) Ethogram
- (ii) Inclusive Fitness
- (iii) Mnemotaxis
- (iv) Latent Learning
- (v) Polyphenism
- (vi) Alloparental behavior.

P.T.O.

(b) Distinguish between any *three* of the following : 3×2=6

- (i) Orthokinesis and Klinokinesis
- (ii) Hormone and Pheromone
- (iii) Intersexual and Intrasexual selection
- (iv) Eusocial and Subsocial species
- (v) Habituation and Sensitization

(c) Match the following scientists with their contributions : 5×1=5

Column A

Column B

- | | |
|----------------------|---|
| (i) Konrad Lorenz | Communication in bees through waggle dance |
| (ii) Oskar Heinroth | Theories of parental investment and reciprocal altruism |
| (iii) W.D. Hamilton | Innate behaviour patterns |
| (iv) Karl von Frisch | Studied imprinting in birds |
| (v) Robert Trivers | Theory of inclusive fitness and Kin selection |

2. (a) Explain associative learning. Add a note on Skinner's experiment to describe operant conditioning. 8

(b) Classify and explain the orientation behaviour with the help of suitable examples. 7

3. (a) Describe various types of dances performed by forager honeybees. With the help of diagram explain the distance and direction component of waggle dance. 8
- (b) What is stimulus filtering ? With suitable example explain its biological significance. 7
4. What is altruism in animal behaviour ? Explain its different types with examples. Why do some animals exhibit altruistic behaviour despite potential risks to their own survival ? 15
5. Explain the concept of male rivalry in animals. Describe *three* distinct ways in which males compete for mates and briefly discuss the advantages gained by the winning male. 15
6. Write short notes on any *three* of the following : 3×5=15
- (a) Innate behaviour
 - (b) Courtship behavior
 - (c) Imprinting
 - (d) Code breaker
 - (e) Artificial intelligence.