

2019

ZOOLOGY

(Major)

Paper : 6.1

(**Animal Behaviour**)

Full Marks : 60

Time : 3 hours

*The figures in the margin indicate full marks
for the questions*

1. (a) Choose the correct answer (any four) :

1×4=4

(i) Defence organ of a soldier of white ant is

(1) sting apparatus

(2) powerful legs

(3) mandibles

(ii) Pollen baskets bearing individual of honeybee is called

(1) queen

(2) forager

(3) drone

(iii) The behaviour biologist Ivan P. Pavlov was designed an apparatus, popularly known as Pavlov's apparatus to study the

(1) classical conditioning

(2) social behaviour of ants

(3) operant conditioning

(iv) Sexual behaviour of an animal is controlled by

- (1) lateral hypothalamus
- (2) posterior hypothalamus
- (3) anterior hypothalamus

(v) Pituitary hormone that controls drinking of an animal is

- (1) antidiuretic hormone (ADH)
- (2) adrenocorticotrophic hormone (ACTH)
- (3) luteinizing hormone (LH)

(b) Fill in the blanks (any three) : $1 \times 3 = 3$

- (i) Biological rhythms of 12·4 or 24·8 hours tide cycle is called ____ rhythm.
- (ii) A method of rapid learning of the mother's appearance by newly hatched chicks is called ____.
- (iii) The ability to solve complex problems through a series of trial-and error method is called ____.
- (iv) An autonomic response established by training to an ordinarily natural stimulus is called ____.

2. (a) Write short notes on (any two) : $2 \times 2 = 4$

- (i) Pheromone producing glands in honeybees

(ii) Dances as a tool of communication in honeybees

(iii) Environmental factors responsible for habitat selection

(b) Differentiate between the following pairs (any two) : $2 \times 2 = 4$

- (i) Homing behaviour and territorial behaviour
- (ii) Classical conditioning and operant conditioning
- (iii) Reasoning and imprinting

3. Answer any three questions : $5 \times 3 = 15$

- (a) Discuss briefly the neuro-biological control of vocalization behaviour in birds. 5
- (b) What is a releaser? Write briefly the Innate Releasing Mechanism (IRM) in animals. $1 + 4 = 5$
- (c) What do you mean by habitat selection? What are the factors responsible for dispersal from the place of birth? Explain briefly. $1 + 4 = 5$
- (d) What is biological rhythms? Discuss various types of biological rhythms found in animals. $1 + 4 = 5$
- (e) What is behaviour? Explain the patterns of behaviours in animals. $1 + 4 = 5$

4. Answer the following questions :

- (a) Define motivation. What are the distinguishing features of motivation? Discuss the role of hypothalamus in controlling the behaviour of animals.

1+4+5=10

Or

Define ethology. What are the importance of ethology? Discuss about the techniques of study of ethology.

1+2+7=10

- (b) Explain the role of genes in shaping the behaviour of an animal. How genes affect the physiological basis of behaviour?

4+6=10

Or

What are the characteristics of a social organization? Discuss various types of social organizations found in monkeys.

2+8=10

- (c) Define aggression. What are the different forms of aggressive behaviours? Explain the factors that regulates aggressive behaviour in animals.

1+3+6=10

Or

With suitable examples, explain various methods of communication found in animals.

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