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3 (Sem-6) ZOO M 1

2020

ZOOLOGY

(Major)

Paper : 6.1

(Animal Behaviour)

Full Marks : 60

Time : Three hours

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

1. (a) Choose the correct answer : **(any four)**
1×4=4
- (i) The term circadian rhythm was coined by B.F. Skinner/Franz Halberg/Karl von Frisch.
- (ii) The first biologist to identify sign stimuli was Konrad Lorenz/Saint-Hilaire/E.O. Wilson.
- (iii) The hierarchical model of motivation was proposed by Ivan Pavlov/Niko Tinbergen/E.L. Thorndike.

Contd.

(iv) The term operant conditioning was coined by Sigmund Freud/B.F. Skinner/Konrad Lorenz.

(v) The meaning of waggle dance of bees was first decoded by Gilbert White/Karl von Frisch/Oskar Heinroth.

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

(i) The highest form of learning is _____ learning.

(ii) The circadian clock of mammals is located in the _____ of mammals.

(iii) The first pheromone to be discovered was _____.

(iv) Directed orientation reaction shown by animals to stimulation by oxygen is called _____.

2. (a) Write short notes on : **(any two)**

$2 \times 2 = 4$

(i) Vacuum activities

(ii) Alarm pheromones

(iii) Biological clock.

(b) Distinguish between : (*any two*)

2×2=4

(i) Ethological versus psychological approach to the study of behavior

(ii) Instinct and learning

(iii) Conditioned stimulus and unconditioned stimulus.

3. Answer *any three* questions : 5×3=15

(a) What is meant by supernormal stimuli? Give examples. 5

(b) Give *five* points of similarities between classical and instrumental conditioning. 5

(c) Describe briefly the figure of eight dance of honey bees. 5

(d) Mention the general properties of circadian rhythms in animals. 5

(e) What are the disadvantages of group living in animals? Discuss. 5

4. Answer the following questions :

(a) Define ethology. Describe the various methods of sampling behavior.

2+8=10

Or

What is meant by stimulus filtering? Explain with suitable examples, how stimulus filtering occurs in animals. Comment on the advantages of stimulus filtering. $2+6+2=10$

(b) What is ethoendocrinology? Discuss the effects of hormones on *any four* behavioural patterns of animals. $2+8=10$

Or

What are models of motivation? With appropriate diagram, describe the Psychohydraulic model of motivation and comment on its drawbacks. $2+6+2=10$

(c) Define territory. Explain how territories are defended by animals and add a note on the benefits of territorial behaviour. $2+4+4=10$

Or

How does dispersal differ from migration? Give an account of the various means employed by animals to disperse and comment on the benefits of dispersal. $2+6+2=10$