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M.Sc. (Semester-IV) Examination, July 2022

ZOOLOGY

(Animal Behaviour)

Time Allowed : Three Hours

Maximum Marks : 70

Minimum Passing Marks : 25

Note : This question paper is divided into four sections. Attempt questions from all the sections as per given directions. Distribution of marks is given in each section

Section - A

(Objective Type questions)

Note : Attempt all questions. Each question carries **1** mark.

[10x1=10]

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(1)

[P.T.O.]

1. (i) Baby waterfowls follow the first parent they see as soon as they can swim. This behavioural phenomenon is known as :
- (a) Training
 - (b) Learning
 - (c) Imprinting
 - (d) Instinct
- (ii) The building of a web by spider is an example of :
- (a) Fixed action pattern
 - (b) Releases
 - (c) Imprinting
 - (d) Learned behaviour
- (iii) The interaction in which an individual gives up or sacrifices some of its own reproductive potential to benefit another individual is called :
- (a) Agnostic
 - (b) Territory

- (c) Hierarchy
- (d) Altruism
- (iv) The decrease in response to repeated or continuous stimulation is called :
 - (a) Instinct
 - (b) Maturation
 - (c) Habituation
 - (d) Insight
- (v) Chemical signals passed between members of same species are called :
 - (a) Pheromones
 - (b) Hormones
 - (c) Waves
 - (d) Sign
- (vi) The different kinds of animal communication include :
 - (a) Tactile and auditory
 - (b) Auditory and visual

- (c) Auditory, visual, tactile and taste
 - (d) None of the above
- (vii) Male blister beetles drumming female abdomen is which type of communication ?
- (a) Visual
 - (b) Tactile
 - (c) Auditory
 - (d) Olfactory
- (viii) Communication is :
- (a) Accomplished only by mammals
 - (b) Innate and learned
 - (c) Learned only
 - (d) Innate only
- (ix) Castes of honey bee developing from fertilized eggs are :
- (a) Males and queen
 - (b) Males and workers

- (c) Queen and workers
- (d) All of the above
- (x) Which of the following best describes a social behaviour ?
 - (a) One monkey grooming another
 - (b) A predator chasing prey
 - (c) An animal defending its territory
 - (d) An animal hibernating

Section - B

(Very Short Answer Type Questions)

Note : Attempt **any five** questions. Each question carries **02** marks. (Word limit : 25-30 words) [5x2=10]

2. Comment on following in brief :

- (i) Eusociality
- (ii) Swarming
- (iii) Conditioning

- (iv) Klinotaxis
- (v) Orientation
- (vi) Thermoregulation
- (vii) Intersexual selection
- (viii) Non-verbal communication

Section - C

(Short Answer Type Questions)

Note : Attempt **any five** questions. Each question carries **04** marks. (Word limit : 250 words) [4×5=20]

3. Explain the following :

- (i) Orthokinesis
- (ii) Suncompass
- (iii) IRM
- (iv) Models of motivation
- (v) Kin selection
- (vi) Polygamous sexual conflict

(vii) Homeostasis and behaviour

(viii) Parental care

Section - D

(Essay Type Questions)

Note : Attempt **any three** questions. Each question carries **10** marks. (Word limit : More than 500 words) [3×10=30]

4. (i) What is reflex action ? Describe its characteristics and types and also add a note on reflex arc.
- (ii) Write an essay on social organization in honey bee.
- (iii) What is FAP ? Describe its characteristics and mechanism.
- (iv) Explain cost-benefit analysis of parental care with suitable case studies.
- (v) Explain how hormones and pheromones influence the behaviour of animals.

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