2014

ZOOLOGY

(Major)

Paper : 6.1

Full Marks : 60

Time : 3 hours

The figures in the margin indicate full marks for the questions

1. Answer the following questions : 1×7=7

   (a) Name the book of Aristotle in which he gave the description on animal behaviour.

   (b) What is meant by r-selected or *k*-selected species?

   (c) Who first proposed the term IRM?

   (d) Which part of the brain controls motivation in vertebrates?

   (e) Name the social unit of monkey in which individual monkeys are smaller in size, shy to intruders and remain hidden in foliage.

(f) Write True or False :

Gathering of a mass of Drosophila on the same rotting fruit forms 'aggregation'.

(g) State the type of reflexes which develop from the previous experiences.

2. Give very short answers to the following : 2×4=8

(a) Mention various components of innate behaviour and learned behaviour.

(b) Write the significance of sign stimuli.

(c) "Reasoning is called the highest form of memory." Justify it.

(d) Write the role of pheromones as sex attractants.

3. Give short answers to the following questions (any *three*) : 5×3=15

(a) Write briefly about the important methods used in Ethological studies. 5

(b) Define territory of an animal species. Explain the territorial behaviour of animals with appropriate examples. 1+4=5

(c) Explain the conditions that are generally taken into account in measuring feeding and drinking motivation. 5

(d) Write a note on 'homing behaviour' in animals. 5

(e) What is imprinting? Give appropriate explanation of imprinting, taking examples from bird species. 5

4. Answer the following questions : 10×3=30

(a) Elaborate Rothenbuhler's experiment to show the genetics of hygienic behaviour honeybees. Add a note on the role of behaviour genetics in development of Ethology. 7+3=10

Or

Mention two common methods that are used in studying hormone-behaviour interaction. Write how the hormones control *(i)* sexual behaviour and *(ii)* aggregassive behaviour of animals. 2+4+4=10

(b) What is communication in animals? Explain how animals communicate with other members of the species through chemical, visual and audio signals. 1+9=10

Or

Narrate two important models of motivation in Ethology. Write how these methods of motivation are assessed. 8+2=10

(c) What is meant by cyclic behaviour of animals? Describe the circadian rhythm as an example of cyclic behaviour.

2+8=10

Or

Name two orders of social insects with examples. Explain how honeybees communicate with other bees of the colony regarding food and water through different dancing patterns.

2+8=10

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