(i) Printed Pages : 2 Roll No. .....

(ii) Questions : 9 Sub. Code : 0156

Exam. Code : 0002

B.A./B.Sc. (General) 2nd Semester

(2053)

ZOOLOGY

Paper–I : Biodiversity & Ecology–I (ZOO-201)

Time Allowed : Three Hours] [Maximum Marks : 36

Note :— Attempt **five** questions in all, including Question No. **1** which is compulsory and selecting **one** question from each Unit. Draw well labelled diagram where required.

1. Write a note on :

   (a) Tracheoles in cockroach

   (b) Ommatidia

   (c) Hypopharynx

   (d) Antennules of prawn

   (e) Ecological efficiency

   (f) Photoperiodism

   (g) Biogeochemical cycle

   (h) Carrying capacity. $1 \times 8 = 8$

UNIT—I

2. (a) Explain the nervous system of cockroach with well labelled diagram. 6

   (b) Write a note on spiracles. 1

3. (a) Give an account of social organisation in honey bee. 5

   (b) Classify and give ecological note on *Agrian* (Dragon fly) and *Forficula* (Earwig). 2

UNIT—II

4. (a) Discuss in detail excretory system of prawn. 4

   (b) Describe thoracic appendages in *Palaemon*. 3

5. (a) Discuss the structure and function of larvae of mosquito. Draw diagrams of larvae of *Anopheles* and *Culex*. 5

   (b) Write classification and economic importance of :

   Julus (millipede) and cancer (crab). 2

UNIT—III

6. Define ecological pyramid. Explain different types of ecological pyramids found in an ecosystem. 7

7. (a) Describe various rules to show relationship between the environmental temperature and morphology of animals. 3

   (b) Write a note on tropical grassland. 2

   (c) Explain the soil profile. 2

UNIT—IV

8. Explain the nitrogen cycle in detail. 7

9. (a) Define growth curve. Explain two types of growth curve. 4

   (b) Write a short note on fossorial type of adaptations. 3