

ZOOLOGY Paper-I

[Biodiversity & Ecology-I (ZOO-201)]

Time : 3 Hours

Max. Marks : 36

Note : In all five questions are to be attempted. Question No. 1 is compulsory.
Attempt any one question from each Unit.

1. Write briefly :

- (a) Hepatopancreas
- (b) Spiracles
- (c) Economic importance of lobster
- (d) Classification of *polister*
- (e) Y-shaped energy flow model
- (f) Thermal stratification
- (g) Dispersion
- (h) Pyramid of biomass

8×1=8

Unit-I

2. (a) Give an account of digestive system of *Periplaneta Americana*. 4
- (b) Write a note on social organization in termites. 3
3. Give classification up to orders and write brief ecological notes on the following :
 - (a) *Lepisma* 2
 - (b) *Forficula* 2
 - (c) *Bombyx* 3

Unit-II

4. (a) Give an account of the structure and functioning of compound eye of Prawn. 5
- (b) Draw different stages in life cycle of *Culex*. 2
5. Give classification upto orders and write brief ecological note and economic importance of the following :
 - (a) King crab 3
 - (b) *Lepas* 2
 - (c) *Sacculina* 2

Unit-III

6. (a) What is soil profile ? Describe briefly the factors that affect soil formation. 4
- (b) What is food web? Explain with a suitable example. 3

7. Define Ecosystem. What are its components ? Discuss about freshwater ecosystem of the world. 7

Unit – IV

8. (a) Discuss in detail the Nitrogen cycle. 4
(b) What are different ways to regulate population? 3
9. (a) Give morphological and physiological adaptations of animals who live in terrestrial habitat. 5
(b) Briefly explain the concept of limiting factor. 2