

Exam. Code : 103202

Subject Code : 1308

B.A./B.Sc. 2<sup>nd</sup> Semester

ZOOLOGY

Paper : Zoo-II B : Biodiversity-II

(Arthropoda to Hemichordata)

Time Allowed—Three Hours] [Maximum Marks—35

- Note** :— (1) Attempt **FIVE** questions.
- (2) Section A is compulsory. It consists of **SEVEN** short answer types questions. Each carries **1** mark.
- (3) Attempt **FOUR** questions from Section B selecting at least **ONE** from each unit. Each question carries **7** marks.

**SECTION—A**

1. Give differences between hemichordates and echinoderms.
2. What do you mean by the term nasutes in termites ?
3. Write short notes on :—
  - (a) Padicellariae in star fish
  - (b) Ophiopluteus larva.
4. Give the complete systematic position of *Balanoglossus*.

5. Write a note on hepatopancreas of Prawn.
6. Give two differences between maxillae and mandibles of cockroaches.
7. Write briefly nuptial flight in honey bees.  $7 \times 1 = 7$

## SECTION—B

### UNIT—I

1. (a) Describe the structure of a typical biramous appendage of Prawn. 3  
(b) Give functions of the following in *Palaemon* :
  - (i) Antennae
  - (ii) Pleopods
  - (iii) Maxillipedes
  - (iv) Peraeopods. 4
2. (a) What are Malpighian tubules ? Describe the structure and functioning of these tubules explaining their role in excretory system of cockroach. 4  
(b) Describe the gonapophyses of male and female cockroach. 3

### UNIT—II

3. (a) Discuss about the different types of castes forming a colony of honey bees. 4  
(b) Write briefly on the sterile castes present in the termite colony. 3

4. (a) Write short notes on the following with reference to *Pila*.
- (i) Velgier
  - (ii) Osphradium. 2
- (b) Write in detail about the various sense organs of *Pila* by highlighting their role. 5

### UNIT—III

5. (a) What type of circulatory system is found in star fish ? Explain its functioning. 5
- (b) Write a short note on regeneration and autotomy power in *Asterias*. 2
6. Discuss the evolutionary significance of larval forms in echinoderms, also give structural details of various types of larvae found in echinoderms. 7

### UNIT—IV

7. Describe the external characters of *Balanoglossus*, also write a brief note on its habits and habitat. 7
8. Discuss the similarities as well as differences between :
- (a) hemichordates and chordates
  - (b) hemichordates and echinoderms. 7