

2023

(CBCS)

(1st Semester)

ZOOLOGY

FIRST PAPER

(Biosystematics and Biology of Non-chordates)

Full Marks : 75

Time : 3 hours

The figures in the margin indicate full marks for the questions

(SECTION : A—OBJECTIVE)

(Marks : 10)

Tick (✓) the correct answer in the brackets provided :

1×10=10

1. The system of taxonomic hierarchy was introduced by

- (a) Carolus Linnaeus ()
- (b) E. P. Odum ()
- (c) Herbert Spencer ()
- (d) Ernst Mayr ()

2. The lowest unit of taxonomy is

- (a) genus ()
- (b) family ()
- (c) order ()
- (d) species ()

3. The special type of binary fission where multinucleate protozoa divide into two or more daughter individuals is called
 - (a) budding ()
 - (b) multiple fission ()
 - (c) plasmotomy ()
 - (d) plasmogamy ()
4. Coelenterates are
 - (a) acoelomates and diploblastic ()
 - (b) coelomates and triploblastic ()
 - (c) pseudocoelomates and diploblastic ()
 - (d) acoelomates and triploblastic ()
5. The reproductive individuals in polymorphisms are called
 - (a) gastrozoid ()
 - (b) dactylozoid ()
 - (c) gonozoid ()
 - (d) gametozoid ()
6. Radial symmetry is best seen in
 - (a) molluscs ()
 - (b) sponges ()
 - (c) starfish ()
 - (d) fishes ()
7. The largest nephridia of *Pheretima* are
 - (a) septal nephridia ()
 - (b) pharyngeal nephridia ()
 - (c) integumentary nephridia ()
 - (d) cuticle nephridia ()
8. In earthworm, the pair of ovaries lies in the
 - (a) 11th segment ()
 - (b) 12th segment ()
 - (c) 13th segment ()
 - (d) 14th segment ()

9. The hormone involved in insect metamorphosis is

- (a) parathormone ()
- (b) oxytocin ()
- (c) juvenile hormone ()
- (d) calcitonin ()

10. The chief excretory waste of insects is

- (a) urea ()
- (b) ammonia ()
- (c) uric acid ()
- (d) amino acid ()

(SECTION : B—SHORT ANSWERS)

(Marks : 15)

Write short notes on the following :

3×5=15

UNIT—I

1. Binomial nomenclature

OR

2. Biological species concepts

UNIT—II

3. Conjugation in *Paramecium*

OR

4. Binary fission in protozoa

UNIT—III

5. Syconoid type of canal system

OR

6. Coelom

UNIT—IV

7. Salient features of *Ctenophora*

OR

8. Reproductive system in *Taenia*

UNIT—V

9. Holometabolous metamorphosis

OR

10. Malpighian tubules of cockroach

(SECTION : C—DESCRIPTIVE)

(Marks : 50)

Answer the following questions :

10×5=50

UNIT—I

1. Write an account on the five kingdom classification.

OR

2. Explain the concept of taxonomic hierarchy.

UNIT—II

3. Explain the different types of locomotion in protozoa.

OR

4. Write the salient features of phylum Annelida. Classify phylum Annelida up to classes with one example each.

UNIT—III

5. What is symmetry in animals? Write an account on the different types of symmetry in animals.

OR

6. What is a coral reef? Explain the different kinds of coral reefs.

UNIT—IV

7. Write an account on the salient features and affinities of Onychophora.

OR

8. Explain the male and female reproductive systems in *Pheretima posthuma*.

UNIT—V

9. Describe the circulatory system in *Periplaneta americana* with suitable diagram.

OR

10. Write an account on social organization in insects.

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