

2023

(NEP—2020)

(1st Semester)

ZOOLOGY (MAJOR/MINOR)

(Non-Chordate Biology)

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. Multiple fission mode of reproduction in amoeba is an example of
 - (a) sexual reproduction ()
 - (b) asexual reproduction ()
 - (c) conjugation ()
 - (d) fragmentation ()
2. The crawling of cells over a substratum is an example of
 - (a) chemotraction ()
 - (b) neurodegeneration ()
 - (c) non-muscle motility ()
 - (d) muscular motility ()
3. Invertebrates do not possess lungs since they respire through
 - (a) gills ()
 - (b) trachea ()
 - (c) skins ()
 - (d) nostrils ()
4. Which mode of locomotion is the fastest among protozoans?
 - (a) Ciliary ()
 - (b) Flagellar ()
 - (c) Amoeboid ()
 - (d) Cell crawling ()

5. The phenomenon of having a linear series of body segments is
(a) coelom ()
(b) metamerism ()
(c) ectoderm ()
(d) endoderm ()
6. What is the most effective organ for food digestion in earthworm?
(a) Stomach ()
(b) Mouth ()
(c) Buccal cavity ()
(d) Pharynx ()
7. The largest class in all the animal kingdom is
(a) Calcarea ()
(b) Crustacea ()
(c) Insecta ()
(d) Hexapoda ()
8. Torsion and detorsion are found in the class
(a) Bivalvia ()
(b) Gastropoda ()
(c) Scaphopoda ()
(d) Cephalopoda ()
9. The insect metamorphic hormone, ecdysone is secreted from
(a) brain ()
(b) corpora allata ()
(c) thoracic gland ()
(d) prothoracic gland ()
10. What type of circulatory system does cockroach possess?
(a) Closed ()
(b) Open ()
(c) Both closed and open ()
(d) Systemic pulmonary ()

(SECTION : B—SHORT ANSWERS)

(Marks : 15)

Write short notes on any *five* of the following, taking at least *one* from each Unit :

3×5=15

UNIT—I

1. Structure of *Euglena*
2. Binary fission

UNIT—II

3. Characteristic feature of phylum Mollusca
4. Metamerism

UNIT—III

5. Significance of torsion
6. Nephridia

UNIT—IV

7. Life history of *Asterias*
8. Excretory organs in *Periplaneta americana*

(SECTION : C—DESCRIPTIVE)

(Marks : 50)

Answer any *five* of the following questions, taking at least *one* from each Unit :

10×5=50

UNIT—I

1. How does an amoeba reproduce? Describe the process of reproduction in amoeba with diagram.
2. How does conjugation occur in *Paramecium*? Write the significance of Kappa particles in *Paramecium*.

UNIT—II

3. Describe the canal system in poriferans.
4. What are the different types of symmetry in animals?

UNIT—III

5. Write an account on corals and coral reefs.
6. Explain the reproductive system of earthworm.

UNIT—IV

7. Explain the types of metamorphosis in insects.
8. Describe the water vascular system of *Asterias* with diagram.

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