

**U.G. 1st Semester Examination-2023****ZOOLOGY****[MAJOR]****Course Code : ZOOL-MJ-T-101****(Taxonomy and Introduction to Non-Chordates)****[NEP-2020]**

Full Marks : 40

Time : 2½ Hours

*The figures in the right-hand margin indicate marks.**Candidates are required to give their answers in their own words as far as practicable.*1. Answer any **five** questions of the following:

2×5=10

- a) What is Portuguese Man-of-War?
- b) What is Linnaean hierarchy?
- c) What is synkaryon in *Paramecium*?
- d) Write down two salient features of the phylum cnidaria.
- e) Why is *Peripatus* called a missing link?
- f) What is the compound eye, and how does it differ from a simple eye in insects?
- g) What is chiasmoneury?
- h) What is madreporite and its function?

*[Turn Over]*

2. Answer any two questions of the following:

5×2=10

- a) What is a sibling species? Describe the Law of Priority with a suitable example. 2+3=5
- b) Discuss the scheme of classification of the phylum Annelida up to subclass with examples. 5
- c) What is radial symmetry? Describe various theories in favour of the evolution of coelom. 2+3=5
- d) Describe the structure of an ommatidium. Explain the concept of "apposition eyes" in insects and its advantages. 3+2=5

3. Answer any two questions of the following:

10×2=20

- a) What is a coral reef, and what are its types? What is the importance of coral reefs? Write down various rules of ICZN. 4+2+4=10
- b) What is a canal system? Describe sycon type of canal system with a proper diagram. Comment on various types of spicules found in sponges. 2+4+4=10
- c) Write a short note on the Water Vascular System in Asteroidea. Comment on the evolutionary significance of Onychophora. 5+5=10
- d) What is moulting in insects? Discuss hormonal control of metamorphosis in arthropods. Give a short note on affinities of Hemichordate with other related groups. 2+4+4=10