CARMEL COLLEGE OF ARTS, SCIENCE & COMMERCE FOR WOMEN,

NUVEM-GOA

SEMESTER END EXAMINATION, NOVEMBER/DECEMBER 2022

Semester: I of B.Sc **Course name & Code: ZOCG 1- Diversity of Non-chordates and Cell Biology**

Total Marks: 80 **Date:23/11/2022** **Duration: 02 hrs** **Total Pages: 2**

Instructions: *1) All Questions are Compulsory (with internal choices)*
2) Figures to the right indicate full marks
3) Draw diagrams wherever necessary

1. Answer **any FOUR** of the following: **(4 x 4 = 16)**

   a. Explain in brief the locomotion in Protozoa?

   b. Elaborate the 'Sycon' type of canal system in Poriferans.

   c. Summarize the general features of Cnidaria.

   d. Describe Metamorphosis in Insecta.

   e. List any four classes of Phylum Nemathelminthes with two characteristics each.

   f. Explain the parasitic adaptations found in Platyhelminthes.

2. Answer **any FOUR** of the following: **(4 x 4 = 16)**

   i) What is PPLO?

   ii) Submit a brief account of nuclear pore complex.

   iii) State the major types of Cancers and add a note on Carcinogens.

   iv) Give a comparative account of Agranular and Granular Endoplasmic reticulum.

   v) Write a note on Microbodies.

   iv) With the help of an illustration explain the structure of the mitochondria.

3. A. Describe Water Vascular System in Asteroidea. (6)

OR

A. Enumerate the general characters of Phylum Echinodermata. (6)

B. What is Torsion? Explain the process in Gastropods. (6)

4. A. Discuss metamerism in Annelida with a note on its significance. (6)

OR

A. Enumerate the general features of Phylum Annelida. (6)

B. Describe Metamorphosis in Insecta. (6)

5. A. Establish the role of chromosomes in Cancer with suitable examples. (6)

OR

A. Comment on the serum requirement, lectin binding sites and cytoskeletal elements of transformed cells. (6)

B. Trace the evolutionary history of Eukaryotic mitochondrion and Chloroplast. (6)

6. A. Submit an account of the structure and function Ribosomes. (6)

OR

A. Discuss the various complexes and proteins involved in ATP synthesis. (6)

B. Elaborate on the Fluid Mosaic model of the Plasma membrane. Add a note on the role of lipid molecules in maintaining membrane Fluidity. (6)
