Progressive Education Society's
Modern College of Arts, Science & Commerce Ganeshkhind, Pune – 16
(Autonomous)
End Semester Examination: Nov./Dec. 2023
Faculty: Science and Technology

Program: B. Sc. Biotech (04) **Semester: III** **SET: A**
Program (Specific): Biotechnology **Course Type: Core**
Class: S. Y. B. Sc. **Max. Marks: 35**
Name of the Course: Cell Biology 1
Course Code: 23 BBT-301 **Time: 2 Hr**

Instructions to the candidate:

1) ***There are 4 sections in the question paper. Write each section on separate page.***
2) ***All Sections are compulsory.***
3) ***Figures to the right indicate full marks.***
4) ***Draw a well labelled diagram wherever necessary.***

SECTION: A

Q1) Answer the following (Attempt any 5/6) **5**

1. Define symport.
2. Give the role of proteoglycans.
3. State any two functions of Rough Endoplasmic Reticulum.
4. Mention any two functions of small cell dimensions.
5. Composition of cell membrane.
6. State the principle of Cell theory.

SECTION: B

Q2) Answer the following (Attempt any 5/6) **10**

1. Write a short note on occluding junctions.
2. What are nuclear pores? State their function.
3. Write a short note on Ion channel proteins.
4. Draw a neat labelled diagram of animal cell
5. Elaborate the role of Nuclear-Cytoplasmic Ratio.
6. Write a short note on facilitated diffusion.

SECTION: C

Q3) Answer the following (Attempt any 2/4) **8**

1. Differentiate between Prokaryote and Eukaryotic cell.
2. Give functions of Golgi bodies.
3. Explain the role and working of Na-K^+ pumps.
4. Give a comparative account on types of cytoskeletal elements.

[P.T.O]

SECTION: D

Q4) Answer the following (Attempt any 2/4) **12**

1. Describe the process of carrier-mediated transport.
2. Both lysosomes and vacuoles are endomembrane structures, yet they differ in terms of their functions; explain.
3. Give a detailed account on structure and function of Mitochondria.
4. Describe the composition and functions of extracellular matrix.