Progressive Education Society's
Modern College of Arts, Science & Commerce Ganeshkhind, Pune – 16
(Autonomous)
End Semester Examination: OCT/NOV 2024
Faculty: Science and Technology

Program: B. Sc. Biotech (04) **Semester: V** **SET: A**
Program (Specific): Biotechnology **Course Type: Core**
Class: T. Y. B. Sc. **Max. Marks: 35**
Name of the Course: Animal Tissue Culture
Course Code: 24 BBT- 504 **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 contact inhibition.
2. Write the role of TPVG in animal tissue culture.
3. Give the contribution of Carrel in ATC.
4. What is the passage number?
5. Write any one function of cell repositories.
6. Give any one example of a synthetic medium.

SECTION: B

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

1. Write any four differences between anchorage and non-anchorage dependent cell culture.
2. Give the role of the CO_2 incubator in ATC using the equation.
3. Comment on organotypic culture.
4. What is a Balanced Salt solution? Name any one BSS.
5. Mention any four applications of ATC in the field of pharmaceuticals.
6. How to determine viable cell count in ATC.

SECTION: C

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

1. Elaborate on sources and detection of mycoplasma.
2. Describe the concept of primary cell culture.
3. Compare between finite and infinite cell lines.
4. Write a note on cryopreservation.

SECTION: D

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

1. Describe in detail the layout of the animal tissue culture laboratory.
2. Elaborate on the working principle, use, and applications of the inverted microscope using a suitable diagram.
3. Write in detail the rationale behind animal tissue culture media formulation.
4. Explain methods of cytogenetic characterization of cell lines.