

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

MSc DEGREE EXAMINATION MAY 2023
(Third Semester)

Branch – BIOTECHNOLOGY

ANIMAL CELL BIOTECHNOLOGY

Time: Three Hours

Maximum: 50 Marks

SECTION-A (5 Marks)

Answer ALL questions

ALL questions carry EQUAL marks

(5 x 1 = 5)

- 1 In animal cell culture the CO₂ levels in the incubators are usually maintained at:
i) 2 % ii) 1 % iii) 5 % iv) 10 %
- 2 In the secondary culture, cells are obtained from _____.
i) primary culture ii) the organism
iii) organ culture iv) phenotypic culture
- 3 Transgenic animals can be designed to study the change in _____.
i) serum ii) urine iii) gene iv) saliva
- 4 A bone marrow transplant may be the best treatment option for:
i) Leukemia and lymphoma ii) Sickle cell disease
iii) Multiple myeloma iv) All of the above
- 5 _____ is when the blood-forming cells you received on transplant day start to grow and make healthy blood cells.
i) Engraftment ii) Homeostasis
iii) Carcinogenesis iv) Myogenesis

SECTION - B (15 Marks)

Answer ALL Questions

ALL Questions Carry EQUAL Marks

(5 x 3 = 15)

- 6 (a) Write Advantages and Disadvantages of Serum in Culture Medium.
OR
(b) Write role of serum in cell culture media.
- 7 (a) What Is DNA Profiling?
OR
(b) What is Cytotoxicity Assay?
- 8 (a) Explain animal disease model.
OR
(b) Explain IVF.
- 9 (a) Explain Stem Cells.
OR
(b) What are the different types of transplant?
- 10 (a) What is Stem Cell Banking?
OR
(b) Applications 3D Printing for Tissue Engineering.

Cont...

SECTION -C (30 Marks)

Answer ALL questions

ALL questions carry EQUAL Marks

(5 x 6 = 30)

11 (a) Give detail account on requirements for animal cell culture.

OR

(b) Write down the types of cell culture contamination.

12 (a) Explain Suspension Cultures and its criteria.

OR

(b) Describe Cryopreservation.

13 (a) Briefly explain Artificial Insemination and Embryo transfer.

OR

(b) Illustrate Methods in the production of transgenic fish.

14 (a) Describe Sources of Stem Cells.

OR

(b) Highlight cord blood stem cell transplantation.

15 (a) What is bioreactor? Explain its types.

OR

(b) Explain Bioartificial liver.

Z-Z-Z

END