

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

MSc DEGREE EXAMINATION DECEMBER 2022
(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. The growth of animal cells in vitro in a suitable culture medium is called _____.
(i) Gene expression (ii) Transgenesis
(iii) Plant tissue culture (iv) Animal cell culture
2. What is a cell line?
(i) Multilayer culture (ii) Transformed cells
(iii) Multiple growth of cells (iv) Sub culturing of primary culture
3. Transgenic animals have _____.
(i) Foreign protein (ii) Foreign gene
(iii) Foreign lipid (iv) Foreign amino acid
4. Bones are made of these main types of material EXCEPT:
(i) Marrow (ii) Spongy bone
(iii) Shell bone (iv) Compact bone
5. _____ is a type of graft surgery involving the transplantation of skin.
(i) Skin grafting (ii) Regeneration
(iii) Endodermal replacement (iv) Mucosal layer

SECTION - B (15 Marks)

Answer ALL Questions

ALL Questions Carry EQUAL Marks (5 x 3 = 15)

6. a List any three physicochemical properties of culture media.
OR
b Mention the four important components in a culture medium with reasons.
7. a Write short notes on benefits of Cryopreservation.
OR
b Explain karyotyping.
8. a What are Transgenic Animals?
OR
b What are ethical issues in animals?
9. a Outline the Properties of Stem Cells.
OR
b State the advantages of Stem Cell Therapy.
10. a Explain tissue engineering in brief.
OR
b Describe Bone Remodeling.

Cont...

SECTION -C (30 Marks)

Answer ALL questions

ALL questions carry EQUAL Marks

(5 x 6 = 30)

- 11 a Give detail account on History of Animal Cell Culture.
OR
b Describe applications of animal cell culture.
- 12 a Explain monolayer subculture and its criteria.
OR
b Explain the importance of cytotoxicity assay.
- 13 a Describe methods of creation of transgenic animals.
OR
b Give detail account on advantages of IVF.
- 14 a Explain different types of stem cells.
OR
b Describe stem cell therapy in neurodegenerative diseases.
- 15 a Describe extracellular matrix and its function.
OR
b Give a detail account on bioreactor design.

Z-Z-Z

END