

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

BSc DEGREE EXAMINATION MAY 2024
(Sixth Semester)

Branch - BIOTECHNOLOGY

ANIMAL 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 process by which developing cells achieve their functional, mature identity as liver, or muscle, or nerve is called _____.
(i) Cleavage division (ii) Morphogenesis
(iii) Differentiation (iv) Pattern formation
- 2 Which of the following is not the part of growth medium for animal cell culture?
(i) Serum (ii) Starch
(iii) Carbon source (iv) Inorganic salts
- 3 Cryopreservation is the preservation of cells very low temperatures of about _____.
(i) -121 °C (ii) 0 °C
(iii) -100 °C (iv) -196 °C
- 4 The technology used for the production of Monoclonal antibodies is _____.
(i) Suspension Culture (ii) Tissue Culture
(iii) Pollen Culture (iv) Hybridoma Technology
- 5 Vaccination was invented by _____.
(i) Edward Jenner (ii) Kohler and Milstein
(iii) Louis Pasteur (iv) Watson and Crick

SECTION - B (15 Marks)

Answer ALL Questions

ALL Questions Carry EQUAL Marks

(5 x 3 = 15)

- 6 a State the role of Maternal contribution in early embryonic development.
OR
b Write Short note on ICSI.
- 7 a Enlist the equipment used in Animal Cell Culture
OR
b State the difference between Totipotency and Pleuripotency
- 8 a State the difference between Primary Cell Culture and Cell line.
OR
b Enlist the methods used in Cell Separation.
- 9 a What is Gene Silencing? State its important applications.
OR
b Enlist the different Physical methods of Transfection.
- 10 a Enlist the ethical issues in Animal Biotechnology.
OR
b What is Molecular Pharming and state its importance?

Cont...

SECTION -C (30 Marks)

Answer ALL questions

ALL questions carry EQUAL Marks

(5 x 6 = 30)

- 11 a Explain with diagram Spermatogenesis in Mammals.
OR
b Enlist the important genes involved in regulation of Oocyte development in Drosophila.
- 12 a Describe about the different media used in Animal cell culture.
OR
b Describe the importance of CO₂ concentration and growth factors in Animal cell culture.
- 13 a Explain the mechanism of Apoptosis and how it is different from Necrotic cell death.
OR
b Explain about Cytotoxicity assays.
- 14 a What is Gene Knockout? State the method and its applications.
OR
b Give an account on Animal Viral Vectors for Transfection.
- 15 a What are Vaccines? State its types.
OR
b Explain the method for production of Transgenic animals and state its applications.

Z-Z-Z

END