

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

MSc DEGREE EXAMINATION MAY 2018
(Fourth Semester)

Branch -BIOTECHNOLOGY

ANIMAL CELL BIOTECHNOLOGY

Time: Three Hours .

Maximum: 75 Marks

Answer ALL questions
ALL questions carry EQUAL marks (2 + 5+ 8)

- 1 a Define the term BSS.
b Write the difference between serum free and serum containing media,
c Describe in detail about equipment, supplies and aseptic techniques to be followed in animal cell culture.

OR

- d Define the role of CO₂ in ATC.
e Write a note on history of Animal Cell Culture.
f Explain in detail about physical and chemical functions by different constituents of growth media.

- 2 a Define cell lines.
b Write a note on the types of cell culture.
c Describe briefly about subculturing and maintenance of cell lines.

OR

- d What are hepatocytes?
e Briefly explain the biomedical application of endothelial cells,
f Discuss the organ culture in detail.

- 3 a What is meant by cell sorting?
b Write a note on role of feeder layer in cell culture,
c Explain in detail about cryopreservation and revival of cell lines.

OR

- d Define cell cloning.
e What are the characterization and selection of cell lines?
f Discuss in detail about the cell banking procedure.

- 4 a What are viral vectors?
b Write the procedure for selection of recombinants,
c Describe briefly about production of recombinant proteins, vaccines in cell culture.

OR

- d Define aquaculture,
e Write a brief note on transgenic animals,
f Explain in detail about IVF technology.

- a What is meant by apoptosis?
b Write about stem cells and their applications,
c Describe bone marrow transplantation in detail.

OR

- d Define the term 'Transplantation',
e Write the methods of studying apoptosis,
f Discuss in detail about tissue engineering of bone and skin.