

P P SAVANI UNIVERSITY
Fifth Semester of B.Sc. Examination
Nov.-Dec.-2020
SSBT3090 – Animal Biotechnology II

05.01.2020, Tuesday

Time: 10:00 a.m. to 12:30 p.m.

Maximum Marks: 60

Section-A (Total Marks - 20)

Q.1 Objectives (20 MCQ Compulsory-20 mark each) (20)

- 1 Serum albumin is the marker of differentiation in
 - A RBCs
 - B Hepatocyte
 - C Keratinocyte
 - D Fibrocyte

- 2 The ferritin beads are used in
 - A Immune panning
 - B Magnetic sorting
 - C Fluorescence activated sorting
 - D None of the above

- 3 The Animal Biotechnology is used in
 - A Pharmaceutical
 - B Agricultural and cattle
 - C Industries
 - D All of the above

- 4 We need characterize the animal cells because
 - A To avoid cross contamination
 - B To check origin of cells
 - C To determine whether the cells are finite or infinite
 - D All of the above

- 5 Q banding occurs because of absorption of
 - A UV light
 - B Visible light
 - C X rays
 - D Spontaneously occurs

- 6 The marker for Oligodendrocyte is
 - A Involucrin
 - B Haemoglobin
 - C Serum albumin
 - D Glycerol phosphate dehydrogenase

- 7 Malignant cells have
 - A Finite life span
 - B Infinite life span
 - C Grow aberrantly
 - D Both A and C

- 8 is/are cryoprotectant
 - A DMSO
 - B PVP
 - C HES
 - D All of the above

- 9 Immortalization can be caused by
 - A Telomerase induced activity
 - B Viral gene
 - C Loss of cell cycle control
 - D All of the above

- 10 The totipotent cell in animal is
A Hematopoietic stem cell
B Egg cell
C Sperm cell
D Fertilized egg
- 11 protein plays an important role in removing toxic substance
A Fibronectin
B Albumin
C Transferrin
D Hemoglobin
- 12 Mitomycin C is used for.....
A Proliferation of cell cycle
B Inactivation of cell cycle
C Arresting the cell cycle
D None of the above
- 13 In C banding pattern, the bands are dark in
A AT rich region
B GC rich region
C Centromere region
D All of the above
- 14 Except improves the clonal growth in Animal tissue
A Buffer and inorganic salts
B Proteins and Carbohydrates
C Yeast and beef extract
D Vitamins and serum
- 15 Poly- A tail of m-RNA is used in Blotting technique
A Southern
B Northern
C Western
D All of the above
- 16 Lymphoid stem cell is an example of
A Totipotent
B Pluripotent
C Multipotent
D Unipotent
- 17 In HAT medium..... pathway is not operative due to presence of aminopterin
A De novo pathway
B Salvage pathway
C Both nucleotide synthesis pathway
D None of the above
- 18 Antigenic markers are used in
A HAT media
B Blotting technique
C Cell sorting
D ELISA

- 19 To obtain xeno free cells for humans, the best option for feeder cells is/are
- A Mouse
 - B Rat
 - C Monkey
 - D Human
- 20 Trypsinization step is used in.....
- A Agar culture (solid)
 - B Suspension culture (Liquid)
 - C Both A and B
 - D None of the above

Section-B (Total Marks - 30)

- Q.1 Short Notes (attempt all four compulsory- 3 marks each) (12)**
- A Define stem cells and its types with example.
 - B What is conditioned medium in Animal Biotechnology
 - C Define Feeder layer and explain its role in Animal Tissue culture
 - D What is cell characterization and Why is it needed?
- Q.2 Explain in detail (attempt all four compulsory-7 marks each) (28)**
- A Write a detailed note on Cryopreservation
 - B Explain different methods of cell sorting/
 - C Describe different banding pattern used for DNA study.
 - D Define differentiation; explain its stages, markers and induction.