

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

MSc DEGREE EXAMINATION DECEMBER 2024
(Third Semester)

Branch – BIOTECHNOLOGY

ANIMAL CELL BIOTECHNOLOGY

Time: Three Hours

Maximum: 75 Marks

SECTION-A (10 Marks)

Answer ALL questions

ALL questions carry EQUAL marks

(10 × 1 = 10)

Module No.	Q. No.	Question	K Level	CO
1	1	Filling of sterile containers with commercially sterile product is known as _____ a) passive packaging b) active packaging c) intelligent packaging d) aseptic packaging	K1	CO1
	2	In the secondary culture, cells are obtained from _____ a) primary culture b) the organism c) organ culture d) phenotypic culture	K2	CO1
2	3	In light microscopy, which of the following is used as fixatives prior to staining technique? a) Osmic acid b) Glutaraldehyde c) Heat d) Osmic acid, glutaraldehyde, heat	K1	CO2
	4	What is a cell line? a) Multilayer culture b) Transformed cells c) Multiple growth of cells d) Sub culturing of primary culture	K2	CO2
3	5	Animals that have had their DNA manipulated to possess and express an extra (foreign) gene are known as _____ a) transgenic animals b) animals c) infected animals d) Bt animals	K1	CO3
	6	Transgenic models are used for research on _____ disease. a) cold b) cough c) HIV d) cancer	K2	CO3
4	7	_____ are a unique kind of primitive, immature cells that have a remarkable capacity to develop into different kinds of cells. a) Stem cells b) Epithelial cells c) Mesenchymal cells d) Ectodermal cells	K1	CO4
	8	_____ refers to the varying ability of stem cells to differentiate into specialized cell types. a) Cell potency b) Cell viability c) Cell-therapy d) Cell-regeneration	K2	CO4
5	9	_____ is the process by which cells interact and attach to neighboring cells through specialized molecules of the cell surface. a) Cell Migration b) Cell Division c) Cell Development d) Cell adhesion	K1	CO5
	10	GEAC stands for _____ a) Genetic Ethical Approval Committee b) Genetic Engineering Active Commission c) Genetic Ethical Active Commission d) Genetic Engineering Approval Committee	K2	CO5

Cont...

SECTION - B (35 Marks)Answer **ALL** questions**ALL** questions carry **EQUAL** Marks

(5 × 7 = 35)

Module No.	Q No.	Question	K Level	CO
1	11.a.	List out the material required for animal cell culture.	K3	CO1
		(OR)		
	11.b.	Write the advantages of serum free media.		
2	12.a.	Describe about Cell banks.	K3	CO2
		(OR)		
	12.b.	Give short notes on biochemical markers.		
3	13.a.	Describe the steps in IVF process.	K4	CO3
		(OR)		
	13.b.	Write the applications transgenic fish.		
4	14.a.	Explain bone marrow transplantation.	K4	CO4
		(OR)		
	14.b.	Explain Cord blood cells.		
5	15.a.	What are the biomaterial used in tissue engineering?	K4	CO5
		(OR)		
	15.b.	Give a detailed account on bioartificial liver.		

SECTION -C (30 Marks)Answer **ANY THREE** questions**ALL** questions carry **EQUAL** Marks

(3 × 10 = 30)

Module No.	Q. No.	Question	K Level	CO
1	16	Give account on Applications of Animal cell culture.	K4	CO1
2	17	Briefly explain Cryopreservation.	K4	CO2
3	18	Describe Gene transfer methods in animals.	K5	CO3
4	19	Briefly explain types and sources of stem cells.	K5	CO4
5	20	Briefly explain ethical issues in biotechnology.	K5	CO5

Z-Z-Z

END