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GIET UNIVERSITY, GUNUPUR – 765022
M. Sc. (Third Semester) Examinations, December – 2022
20ASPE304 – Animal Biotechnology
(Life Science - Animal Science)

Time: 3 hrs

Maximum: 70 Marks

(The figures in the right-hand margin indicate marks.)

PART – A**(2 x 10 = 20 Marks)****Q.1. Answer ALL Questions**

	CO#	Blooms Level
a. What is a stem cell and why is it used for cell culture?	CO4	1
b. Write the two characteristics of animal viral vectors for transfection.	CO4	2
c. What is the application of cryopreservation in animal cell culture?	CO3	1
d. What is the application of in vitro fertilization and embryo culture?	CO3	1
e. What is the application of 3D cell culture?	CO3	1
f. What is the trypsinization technique in animal cell culture?	CO2	1
g. How do hollow fibre reactors imitate the in vivo cell culture?	CO2	2
h. Enlist the various technologies for the immortalization of cells.	CO1	3
i. What is primary cell culture?	CO1	1
j. How to sterilize glass wares for cell culture?	CO1	2

PART – B**(10 x 5 = 50 Marks)**Answer ANY FIVE questions

	Marks	CO#	Blooms Level
2. a. What is the role of culture media in animal cell culture?	2	CO1	1
b. Describe the types, requirements, characteristics and methods for the preparation of culture media.	8	CO1	2
3.a. What is the importance of the characterization of cultured cells?	3	CO2	1
b. Write various methods of characterization of cultured cells.	7	CO2	2
4. a. What is fibroblast in animals?	2	CO2	1
b. Describe the procedure for the preparation and maintenance of chick fibroblast culture.	8	CO2	2
5.a. What is the importance of histotypic culture?	2	CO2	1
b. Write an essay on histotypic cultures.	8	CO2	2
6. a. What is cryopreservation?	2	CO3	1
b. Describe the mechanism and use of cryopreservation in the field of biotechnology.	8	CO3	2
7.a. Enlist the requirements for IVF.	3	CO4	3
b. Give an illustrative account of IVF, embryo culture and embryo transfer techniques.	7	CO4	3
8. a. What is a cell line?	2	CO1	1
b. Describe the establishment of a cell line for animal cell culture.	8	CO1	2

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