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**GIET UNIVERSITY, GUNUPUR – 765022**  
M. Sc. (First Semester) Examinations, March – 2023  
**22BTPC103 - Plant and Animal Biotechnology**  
(Biotechnology)

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 ribosome-inactivating proteins?	CO 1	K2
b. What do you mean by solidifying agents?	CO 1	K1
c. Define osmoticum.	CO 1	K1
d. Explain on cybrids.	CO 2	K2
e. What are the importance of cryoprotectants?	CO 2	K3
f. Define trypsinization.	CO 1	K2
g. What is a binary vector system?	CO 3	K2
h. Define cat gene.	CO 3	K1
i. Write on stages of vaccine production.	CO 4	K2
j. Define transcriptomics.	CO 4	K2

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

	Marks	CO#	Blooms Level
2. a. Give an account of constituents of the plant tissue media.	7	CO 1	K1
b. Explain on sterilization of non-living articles.	3	CO 1	K1
3.a. Describe the method of isolation and culture of protoplasts.	7	CO 1	K2
b. How homozygous plants are produced?	3	CO 1	K1
4. a. Give an account of <i>Agrobacterium</i> -mediated gene delivery.	7	CO 2	K3
b. Write on reporter genes.	3	CO 2	K2
5.a. Describe in details on cryopreservation of sperms.	7	CO 3	K1
b. Explain on super ovulation.	3	CO 3	K1
6. a. Illustrate on DNA fingerprinting techniques.	7	CO 3	K3
b. Write on molecular marker.	3	CO 4	K2
7.a. How insect resistance crop plant are produced using genetic engineering?	7	CO 4	K2
b. Write short notes on secondary metabolite.	3	CO 3	K1
8. a. How detection of meat adulteration is being made by DNA based methods?	7	CO 4	K2
b. Give an account of animal cloning.	3	CO 2	K2

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