Reg. No | | | | | | | | | | |

AY 24

GANDHI INSTITUTE OF ENGINEERING AND TECHNOLOGY, ODISHA, GUNUPUR.

(GIET UNIVERSITY)

M. Sc. (First Semester - Regular) Examinations, February – 2025

24MBIPC11003 – Plant and Animal Biotechnology

(Biotechnology)

Time: 3 hrs | Maximum: 60 Marks

Answer ALL questions

(The figures in the right hand margin indicate marks)

PART – A **(2 x 5 = 10 Marks)**

		CO #	Blooms Level
Q.1.	Answer ***ALL*** the questions		
a.	What is somatic embryogenesis?	CO1	K1
b.	Explain somaclonal variations.	CO2	K1
c.	Define balanced salt solutions (BSS)	CO3	K1
d.	What are abiotic stresses of a plant?	CO4	K1
e.	Define *in vitro* fertilization?	CO2	K1

PART – B **(10 x 5 = 50 Marks)**

		Marks	CO #	Blooms Level
	Answer ***ALL*** the questions			
2.a.	Give an account of preparation of artificial seeds?	7	CO1	K1
b.	Explain the batch culture of plant cell?	3	CO1	K1
	(OR)			
c.	Give an account of constituents of the plant tissue media?	7	CO1	K1
d.	Explain on sterilization of non-living articles?	3	CO1	K1
3.a.	Illustrate on particle bombardment techniques?	7	CO2	K2
b.	Write short notes on chloroplast engineering?	3	CO2	K2
	(OR)			
c.	Give an account of *Agrobacterium*-mediated gene delivery?	7	CO2	K3
d.	Write on reporter genes?	3	CO2	K2
4.a.	How the diseases resistance plants are prepared using gene transfer techniques?	7	CO3	K2
b.	Write on recombinant approaches to vaccine production?	3	CO3	K2
	(OR)			
c.	Illustrate on DNA fingerprinting techniques?	7	CO3	K2
d.	Write on molecular marker?	3	CO4	K2
5.a.	Describe the methods of micro propagation?	7	CO3	K3
b.	What are the importance of molecular markers?	3	CO4	K2
	(OR)			
c.	How insect resistance crop plant are produced using genetic engineering?	7	CO4	K2
d.	Write short notes on secondary metabolite?	3	CO4	K1
6.a.	Write in details on application of animal cell culture?	7	CO2	K1
b.	What is functional genomics?	3	CO4	K1
	(OR)			
c.	How detection of meat adulteration is being made by DNA based methods?	7	CO4	K2
d.	Give an account of animal cloning?	3	CO2	K2

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