BT

Reg.No.:												

VIVEKANANDHA COLLEGE OF ENGINEERING FOR WOMEN
[AUTONOMOUS INSTITUTION AFFILIATED TO ANNA UNIVERSITY, CHENNAI]
Elayampalayam – 637 205, Tiruchengode, Namakkal Dt., Tamil Nadu.

Question Paper Code: 90025

B.E. / B.Tech. DEGREE END-SEMESTER EXAMINATIONS – NOV. / DEC. 2024
Sixth Semester
Biotechnology
U19BT619 – PLANT & ANIMAL BIOTECHNOLOGY
(Regulation 2019)

Time : Three Hours | Maximum : 100 Marks

Answer ALL the questions

Knowledge Levels (KL)	K1 – Remembering	K3 – Applying	K5 - Evaluating
	K2 – Understanding	K4 – Analyzing	K6 - Creating

PART – A

(10 x 2 = 20 Marks)

Q.No.	Questions	Marks	KL	CO
1.	What are the types of sterilization?	2	K1	CO1
2.	Write the pathways in plant tissue culture.	2	K2	CO1
3.	Define clean gene technology.	2	K1	CO2
4.	State the types of plant transformation methods.	2	K2	CO2
5.	What do you mean by passaging of a cell line?	2	K1	CO3
6.	Mention the significance of CO_2 incubator in cell culture.	2	K1	CO3
7.	Tabulate the significance of virus mediated gene transfer.	2	K2	CO4
8.	Write about transfection.	2	K1	CO4
9.	Bring out the importance of BT crops.	2	K2	CO5
10.	What is the importance of rumen microbes?	2	K1	CO5

PART – B

(5 x 13 = 65 Marks)

Q.No.	Questions	Marks	KL	CO
11. a)	Explain in detail about micropropagation in plant tissue culture.	13	K2	CO1

(OR)

	b)	Highlight the preparation of Synthetic seeds in detail.	13	K1	CO1
12.	a)	List out and explain the different direct methods of transformation.	13	K3	CO2
		(OR)			
	b)	In detail explain about Agrobacterium mediated gene transfer with a neat sketch.	13	K2	CO2
13.	a)	Describe the different types of animal cell culture in detail.	13	K2	CO3
		(OR)			
	b)	Write down the classification of stem cells and its applications in detail.	13	K3	CO3
14.	a)	Compare and contrast stable transfection and transient transfection method of gene transfer with examples.	13	K3	CO4
		(OR)			
	b)	Briefly explain the virus mediated gene delivery system with examples.	13	K2	CO4
15.	a)	Outline the ideal probiotics characteristics and its mode of action.	13	K1	CO5
		(OR)			
	b)	Pen down the role of lactogenic hormones in detail.	13	K3	CO5

PART – C

(1 x 15 = 15 Marks)

Q.No.		Questions	Marks	KL	CO
16.	a)	Analyze the essential features that should be considered in scaling up the animal cell culture for large scale production of a therapeutic protein.	15	K4	CO3
		(OR)			
	b)	Classify the different bioreactors employed in the pilot scale production of plant tissue culture.	15	K2	CO1