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GIET UNIVERSITY, GUNUPUR – 765022
 B. Tech (Third Semester - Regular) Examinations, December – 2022
21BBTPC23001 – Fundamental of Biotechnology
 (Biotechnology)

Time: 3 hrs

Maximum: 70 Marks

Answer ALL questions**(The figures in the right hand margin indicate marks)****PART – A****(2 x 5 = 10 Marks)**

Q.1. Answer <i>ALL</i> questions	CO #	Blooms Level
a. What are cyanobacteria?	CO 1	K1
b. Define episomes?	CO 1	K1
c. What do you mean by blunt cut end?	CO 2	K2
d. Define shuttle vector?	CO 3	K1
e. What is bio stimulation?	CO 4	K3

PART – B**(15 x 4 = 60 Marks)**Answer *ALL* the questions

	Marks	CO #	Blooms Level
2. a. Draw the ultrastructure of an animal cell?	8	CO 1	K1
b. Compare the cell wall of gram positive and gram negative bacteria?	7	CO 1	K2
(OR)			
c. Explain the Griffiths experiments on transformation?	8	CO 2	K2
d. Analyse the type II topoisomerases enzymes?	7	CO 2	K1
3.a. Write details on construction of genomic library?	8	CO 3	K2
b. What are the application of genomic library?	7	CO 3	K1
(OR)			
c. Critically explain the procedure of Northern blotting techniques?	8	CO 3	K3
d. Give an account of application of Northern blotting techniques?	7	CO 3	K2
4.a. Describe the principle and procedure of PCR technology?	8	CO 3	K3
b. Write the application of PCR technology	7	CO 3	K2
(OR)			
c. Explain the component and importance of bio fertilizer?	8	CO 4	K2
d. Describe types and importance of bio pesticides?	7	CO 4	K1
5.a. Give an account of process and types of bioleaching techniques?	8	CO 4	K2
b. Write in details on uranium bioleaching process?	7	CO 4	K1
(OR)			
c. Illustrate RNA as genetic material with reference to Tobacco Mosaic Virus?	8	CO 3	K2
d. Draw the structure of bacteriophages and explain its parts?	7	CO 1	K1

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