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GIET UNIVERSITY, GUNUPUR – 765022
 B. Tech (Third Semester Regular) Examinations, December – 2023
22BBTPC23003 – Microbiology
 (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 do you mean by synthetic media?	CO1	K3
b. What is Decolourizer in Gram staining?	CO1	K3
c. What do you mean by heterocyst of cyanobacteria?	CO2	K1
d. Illustrate viral hepatitis.	CO3	K3
e. Define Shigellosis.	CO4	K3

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

	Marks	CO #	Blooms Level
2. a. Give an account of different types of culture media of microorganisms.	7	CO1	K3
b. Write the economic importance of fungi.	8	CO1	K2
(OR)			
c. Give an account of establishment of pure culture.	7	CO1	K3
d. Describe Acid Fast staining and write its significance.	8	CO1	K2
3.a. Explain in detail on measurement of bacterial growth.	7	CO2	K1
b. Explain the growth kinetics of bacterium in batch culture.	8	CO2	K3
(OR)			
c. Write in detail on classification of mutations.	7	CO2	K1
d. Explain on establishment of synchronous culture in the laboratory.	8	CO2	K3
4.a. Give a details account of types of microbes associated with food spoilage.	7	CO3	K3
b. Give an account on DNA and RNA viruses and their diseases.	8	CO3	K4
(OR)			
c. Describe the life cycle of hepatitis virus.	7	CO3	K3
d. Write on details about five fungal diseases of human.	8	CO3	K3
5.a. Give an account on mode of action of antibiotics? Add notes on therapeutic index (TI).	8	CO4	K3
b. Explain five bacteriological analysis of water.	7	CO4	K4
(OR)			
c. Write details on Methanogens.	8	CO4	K3
d. Explain extremophiles with respect to psychrophile and thermophile.	7	CO4	K4

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