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GIET UNIVERSITY, GUNUPUR - 765022
M. Sc. (First Semester) Regular Examinations, February - 2024
22LSPC103 - Microbiology and Pathology
(Life sciences)

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. How are microorganism classified?	CO1	K1
b. Mention two applications of microbiology.	CO1	K1
c. What are the different types of bacteria?	CO1	K2
d. Differentiate between viruses and virioids.	CO1	K4
e. What nutrition is important for microbes to sustain their lives?	CO2	K4
f. Why is virus used as a tool for genetic engineering.	CO2	K2
g. Describe the characteristics of mycoplasma.	CO2	K2
h. State the difference between benign and malignant tumor.	CO4	K4
i. What deficiency disease occurs due to lack of Vit C and Vit E ?	CO4	K2
j. What are apoptotic bodies?	CO4	K2

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

	Marks	CO #	Blooms Level
2. a. Explain the theory of spontaneous generation.	5	CO1	K2
b. Write the contribution of Louis Pasteur and Robert Koch in the field of microbiology.	5	CO1	K1
3. Illustrate the bacterial cell structure and explain its morphological features.	3+7	CO1	K4
4. What are the different techniques used for the isolation and culture of microorganisms.	10	CO1	K4
5.a. How microbes play vital role in industry and pharmaceuticals?	5	CO2	K4
b. Graphically represent microbial growth curve and explain its different phases.	5	CO2	K3
6. a. Elaborate the process of reproduction of virus in reference to lysogenic cycle.	5	CO3	K2
b. What is metagenomics? Mention its process and applications.	5	CO3	K2
7.a. Enumerate the process of microbial pathogenesis.	5	CO4	K2
b. Differentiate between necrosis and apoptosis with proper diagram.	5	CO4	K4
8. a. Describe about different disease caused due to environmental exposures.	5	CO4	K2
b. Write short note on nutritional diseases and its types.	5	CO4	K2