



**Gandhi Institute of Engineering and Technology University, Odisha, Gunupur
(GIET UNIVERSITY)**

M.Sc. (First Semester - Regular) Examinations, January - 2026
24MLSPC11003– Microbiology and Pathology
(Life Science)

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)**Q.1. Answer **ALL** questions

	CO #	Blooms Level
a. What is prophage?	CO1	K1
b. What is anammox?	CO2	K2
c. What is the scope & importance of microbiology?	CO1	K2
d. Difference between Pasteurization and Tyndallisation.	CO3	K2
e. What is Apoptotic condition?	CO2	K1

PART – B**(10 x 5 = 50 Marks)**Answer ALL the questions

	Marks	CO #	Blooms Level
2. a. Explain structure and function of bacteriophage with diagram	5	CO1	K2
b. Explain Lysogenic cycle.	5	CO2	K2
(OR)			
c. Explain Spontaneous generation theory.	5	CO1	K2
d. Explain different types of culture media.	5	CO3	K2
3.a. Explain Sterilization techniques.	5	CO3	K2
b. Give a short note on cyanobacteria.	5	CO2	K2
(OR)			
c. Explain Transduction with diagram.	5	CO2	K2
d. Discuss Nitrogen Cycle	5	CO2	K2
4.a. Explain nitrogen fixation.	5	CO2	K2
b. Explain viral structure and viral replication.	5	CO1	K2
(OR)			
c. Explain Transformation and Conjugation.	5	CO2	K2
d. Give difference between necrosis and Apoptosis.	5	CO2	K2
5.a. What is Symbiosis? Explain about Ruminant symbiosis.	5	CO2	K2
b. Give a short note on mycoplasma.	5	CO2	K2
(OR)			
c. Give a short note on Antibiotics.	5	CO3	K2
d. Discuss about Carbon cycle.	5	CO2	K2
6.a. Give a short note on viroid.	5	CO1	K2
b. What are pure culture techniques.	5	CO3	K2
(OR)			
c. What are Probiotics? Give a short note	5	CO3	K2
d. What is quorum sensing? Give a short note.	5	CO2	K2

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