



**GANDHI INSTITUTE OF ENGINEERING AND TECHNOLOGY, ODISHA, GUNUPUR  
(GIET UNIVERSITY)**

M. Sc. (First Semester - Regular) Examinations, February - 2025

**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** the questions

	CO #	Blooms Level
a. What do you mean by semi synthetic antibiotic? Give example?	CO2	K1
b. Difference between virulent & temperate phage?	CO3	K2
c. Name two obesity related disorder?	CO4	K2
d. Difference between gm +ve and gm –ve bacteria?	CO1	K2
e. Name two virus used in genetic engineering technique?	CO3	K2

**PART – B**

**(10 x 5 = 50 Marks)**

Answer **ALL** the questions

	Marks	CO #	Blooms Level
2.a. Discuss about microbial staining methods.	5	CO1	K3
b. Discuss about nutritional deficiencies and obesity related disorder.	5	CO4	K3
(OR)			
c. Discuss about antibiotics with its mode of action.	5	CO2	K3
d. Write notes on spontaneous generation.	5	CO1	K2
3.a. Write notes on transduction process with diagram.	5	CO3	K2
b. Explain about bacterial growth with factors affecting bacterial growth.	5	CO2	K3
(OR)			
c. Discuss about conjugation process with diagram.	5	CO3	K3
d. Discuss about pure culture technique.	5	CO2	K3
4.a. Write brief outline survey of Microbes such as protozoa and mycoplasma.	5	CO1	K2
b. Write notes on virus as a tool for genetic Engineering.	5	CO3	K2
(OR)			
c. Discuss about lytic and lysogenic life cycle of virus.	5	CO3	K3
d. Write notes on about bacterial nutrition.	5	CO2	K2
5.a. Discuss about microbial classification.	5	CO1	K3
b. Explain about metagenomics with application.	5	CO3	K3
(OR)			
c. Discuss about sterilization and its types.	5	CO1	K3
d. Discuss about the use of microbes in agriculture.	5	CO2	K3
6.a. Explain about culture media with its different types.	5	CO1	K3
b. Write about bacterial nutrition.	5	CO2	K2
(OR)			
c. Explain about the environmental and occupational exposures leading to diseases.	5	CO4	K3
d. Discuss about brief outline survey of microbes such as yeast and cyanobacteria.	5	CO2	K3

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