QP Code: R251G016 | Reg. No | | | | | | | | | | | AY 24

GANDHI INSTITUTE OF ENGINEERING AND TECHNOLOGY, ODISHA, GUNUPUR

(GIET UNIVERSITY)

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

24MBIPC11004 – Microbiology

(Biotechnology**)**

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. Define chemoheterotrophic nutrition in microbes.	CO1	K1
b. What is a haustoria?	CO2	K2
c. Define antisepsis.	CO3	K2
d. Write on importance of lactic acid bacteria.	CO3	K3
e. What do you mean by ruminant symbiosis?	CO4	K1

PART – B **(10 x 5 = 50 Marks)**

Answer ***ALL*** the questions		Marks	CO #	Blooms Level
2.a.	Write on mechanism of action of antibiotics.	5	CO1	K1
b.	Explain scope of microbiology.	5	CO1	K2
	(OR)			
c.	Give an account of nutritional types of bacteria.	5	CO1	K1
d.	Explain on types of microbial culture media.	5	CO1	K2
3.a.	Give an account of bacterial growth in batch culture.	5	CO1	K3
b.	Write on classification of bacteria.	5	CO1	K1
	(OR)			
c.	Write notes on Cyanobacteria.	5	CO1	K2
d.	Explain sporogenesis in bacteria.	5	CO1	K2
4.a.	Illustrate on unculturable microbes.	5	CO2	K2
b.	Draw ultra-structure of mycoplasma and write its economic importance.	5	CO2	K1
	(OR)			
c.	Explain on biological control of microorganisms.	5	CO1	K3
d.	Write on structure and biological importance of prions.	5	CO1	K2
5.a.	Write on taxonomy of virus.	5	CO3	K2
b.	Write notes on various sub-viral particles.	5	CO3	K1
	(OR)			
c.	Draw and describe the bacteriophage structure.	5	CO1	K1
d.	Explain on viral replication.	5	CO1	K2
6.a.	Explain in details on nitrogen fixation by microbes.	5	CO4	K3
b.	Write on probiotics and their importance.	5	CO4	K2
	(OR)			
c.	Give an account of host-pathogen interaction.	5	CO1	K1
d.	Explain nitrogen cycles?	5	CO1	2

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