CBCS SCHEME

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BBT304

Third Semester B.E./B.Tech. Degree Examination, Dec.2024/Jan.2025
Microbiology

Time: 3 hrs. Max. Marks: 100

Note: 1. Answer any FIVE full questions, choosing ONE full question from each module.
2. M : Marks , L: Bloom's level , C: Course outcomes.

		Module – 1	M	L	C
Q.1	a.	Discuss the major milestones in the history of microbiology and their significance.	10	L1	CO1
	b.	Elaborate on Reproduction of Bacteria.	10	L1	CO1
		OR			
Q.2	a.	Explain Microbial diversity and basis for microbial taxonomy.	10	L1	CO1
	b.	Describe the general features and classification of true bacteria, prions and spirochetes.	10	L1	CO1
		Module – 2			
Q.3	a.	Describe the principle of Bright - field and Dark field microscopy and their applications.	10	L1	CO2
	b.	Explain the working principle and uses of Scanning Electron Microscopy (SEM).	10	L1	CO2
		OR			
Q.4	a.	What are Pure culture techniques and how are they applied in Microbiology?	10	L2	CO2
	b.	Discuss the preparation and types of culture media used in microbiology.	10	L1	CO2
		Module – 3			
Q.5	a.	Explain Microbial growth phases and factors affecting it.	10	L2	CO3
	b.	Discuss Microbial primary and Secondary metabolites with examples.	10	L2	CO3
		OR			
Q.6	a.	Discuss the importance of metabolic pathways in micro organisms , EMP and TCA fermentation.	10	L3	CO3
	b.	Describe the methods of microbial growth control , focusing on sterilization and disinfection techniques.	10	L2	CO3
		Module – 4			
Q.7	a.	Explain the modes of transmission and pathology of viral diseases HIV and Covid – 19.	10	L1	CO4

	b.	Discuss the symptoms, prevention and treatment of bacterial diseases like TB and Cholera.	**10**	**L1**	**CO4**
		OR			
Q.8	**a.**	Describe the life cycle and pathogenicity of protozoans causing Malaria and Amebiasis.	**10**	**L2**	**CO4**
	b.	Explain common fungal infections like ringworm and yeast infections and their symptoms and treatment.	**10**	**L2**	**CO4**
		Module – 5			
Q.9	**a.**	Discuss the role of beneficial microbes in agriculture with examples of biofertilizers and VAM.	**10**	**L2**	**CO5**
	b.	Describe Microbiology of potable water and waste water treatment.	**10**	**L3**	**CO5**
		OR			
Q.10	**a.**	Explain Air sampling techniques and commonly found atmospheric microbe profile.	**10**	**L2**	**CO5**
	b.	Explain the production of Rhizobium and Azotobacter with neat flow chart.	**10**	**L3**	**CO5**

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