

# CBCS SCHEME

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BBT304

**Third Semester B.E./B.Tech. Degree Examination, Dec.2023/Jan.2024**

## 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.	Sketch a neat labelled diagram of COVID – 19 viruses, explain the structure and reproduction of the virus.	10	L1	CO1
	b.	Delineate contributions of Robert Koch to the field of microbiology.	10	L2	CO1
<b>OR</b>					
Q.2	a.	Misfolded proteins lead to neuronal cell death – Justify.	10	L1	CO1
	b.	Explain General features of Spirochetes.	10	L2	CO1
<b>Module – 2</b>					
Q.3	a.	Fluorophores are required to visualize the organelles of cell using this microscope. Justify.	10	L2	CO2
	b.	Describe the microscope that scans the surface by producing secondary electrons.	10	L2	CO2
<b>OR</b>					
Q.4	a.	Given a mixed culture enumerate the methods to isolate a single colony.	10	L2	CO1
	b.	Describe any two differential staining methods.	10	L2	CO2
<b>Module – 3</b>					
Q.5	a.	Delineate the factor affecting microbial growth under controlled conditions.	10	L2	CO2
	b.	Sketch and explain the TCA cycle.	10	L2	CO1
<b>OR</b>					
Q.6	a.	Describe the stages of microbial growth, explain the preferred industrial method.	10	L2	CO5
	b.	Differentiate sterilization and disinfection techniques.	10	L2	CO2
<b>Module – 4</b>					
Q.7	a.	Identify genus and articulate system and treatment when diagnosed with Typhoid.	10	L2	CO3
	b.	Describe the causative agents, its symptoms and treatment of Hepatitis.	10	L2	CO4
<b>OR</b>					
Q.8	a.	Identify the causative agent of Malaria and discuss its symptoms and treatment.	10	L3	CO4
	b.	Describe the symptoms, treatment and causes of ringworm.	10	L3	CO2
<b>Module – 5</b>					
Q.9	a.	With a neat labelled diagram, explain one secondary waste water treatment method.	10	L2	CO2
	b.	Delineate the importance and sketch any 2 biogeochemical cycles.	10	L2	CO2
<b>OR</b>					
Q.10	a.	Differentiate VAM and Rhizobium.	10	L3	CO2
	b.	With suitable examples, explain the use of Biofertilizers.	10	L3	CO3

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