



# CBCS SCHEME

18BT32

Third Semester B.E. Degree Examination, Dec.2019/Jan.2020

## Microbiology

Time: 3 hrs.

Max. Marks: 100

Note: 1. Answer FIVE full questions, choosing ONE full question from each module.

2. Draw the neat diagrams wherever necessary

### Module-1

- 1 a. Discuss in detail the ultrastructure of a bacterial cell. (10 Marks)  
b. Write a critical note on milestone contribution of Louis Pasteur and Robert Koch. (10 Marks)

OR

- 2 a. Write explanatory note on structure and functions of fungi. (10 Marks)  
b. Write short notes on Prious and Spirochetes. (10 Marks)

### Module-2

- 3 a. Explain the principle, instrumentation and application and TEM. (10 Marks)  
b. Write a critical note on pure culture technique. (10 Marks)

OR

- 4 a. Elaborate on any one different staining technique and its applications. (10 Marks)  
b. Discuss the process of moist heat sterilization. (10 Marks)

### Module-3

- 5 a. Derive a mathematical equation explaining growth rate of generation there in bacteria. (10 Marks)  
b. Give a detailed account of TCA cycle Add a note on glucose balance sheet. (10 Marks)

OR

- 6 a. Explain the various parameter that affect microbial growth. (10 Marks)  
b. Write a detailed account on secondary metabolites. Explain heterolactic acid pathway. (10 Marks)

### Module-4

- 7 a. Give a detailed explanation on AIDS. Add a note on HIV replication. (10 Marks)  
b. Explain causative organization, symptoms clinical diagnosis and treatment of diphteria. (10 Marks)

OR

- 8 a. In detail explain, the life cycle of malarial parasite. (10 Marks)  
b. Write a elaborate note on, tuberculosis. Add a note on its diagnosis. (10 Marks)

### Module-5

- 9 a. Explain the structure of soil with respect to microbial growth. (10 Marks)  
b. Define biofertilizers. Explain the method of isolation and mass production of Rhizobium. (10 Marks)

OR

- 10 a. Give a detailed account of N<sub>2</sub> cycle. (10 Marks)  
b. Outline the microbiology of potable water. (10 Marks)

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Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.  
2. Any revealing of identification, appeal to evaluator and /or equations written eg, 42+8 = 50, will be treated as malpractice.