S.No. 328 **17PBT03**

(For the candidates admitted from 2017-2018 onwards)

M.Sc. DEGREE EXAMINATION, NOVEMBER 2017.

First Semester

Biotechnology

MICROBIOLOGY

Time : Three hours Maximum : 75 marks

SECTION A — (5 × 5 = 25 marks)

Answer ALL questions.

1. (a) Explain the history and discovery process in the file of microbiology.

Or

(b) Describe the ultra structure of bacterium reveals the following cell structure.

2. (a) Explain streak and spread plate technique.

Or

(b) Explain the process of continuous culture.

3. (a) Describe how microorganisms are classified based on nutrition.

Or

(b) Explain the role of microorganism in food industry.

4. (a) Explain the etiology and pathogenesis, treatment and diagnosis of Cholera.

Or

(b) Explain the properties of Antimicrobial agents.

5. (a) Define Mutation. Explain the types of mutation.

Or

(b) Explain the genetic system and reason for using Neuro spora as model organism.

SECTION B — ($5 \times 10 = 50$ marks)

Answer ALL questions.

6. (a) Explain the principle, working protocol and applications of phase contrast microscope.

Or

(b) Discuss the scope of microbiology and future of microbial world.

7. (a) Explain in detail the phases of microbial growth curve.

Or

(b) Explain any three Differential media and its implication in the context of Diagnosis.

8. (a) Explain the micro and macro nutritional requirements of microorganism.

Or

(b) Discuss the process of nitrogen fixation by Rhizobium.

9. (a) Explain the pathogenesis and diagnosis, and prevention of Hepatitis B virus infection.

Or

(b) Explain the pathogenesis and diagnosis, and prevention of candidiasis.

10. (a) Explain the properties and characterization of plasmids.

Or

(b) Explain in detail the process of bacterial transformation.
