

Exam. Code : 107401

Subject Code : 2237

B.Sc. Biotechnology Ist Semester

GENERAL MICROBIOLOGY—A

Paper—BT-8

Time Allowed—3 Hours] [Maximum Marks—40

Note :- Answer **ALL** questions from Section A, any **five** questions from Section B and any **two** questions from Section C.

SECTION—A

1. Discuss the following briefly : 8×1
- (a) Resolution of microscope
 - (b) Facilitated diffusion
 - (c) Temperate virus
 - (d) Appresoria
 - (e) LPS
 - (f) Mordant
 - (g) Phylogeny
 - (h) Catalase test.

SECTION—B

2. Write short notes on the following (any five) : 4×5
- Immunofluorescence microscopy.
 - Nutritional forms of bacteria.
 - Types of asexual spores in fungi.
 - Culture collection center.
 - The structure and function of peptidoglycan.
 - Spore staining.
 - DNA-DNA hybridization.
 - Numerical taxonomy.

SECTION—C

- Discuss the various transport mechanisms used by bacteria for nutrient uptake. 6
- Discuss in detail some of the salient features, method of sexual reproduction of Ascomycetes and Zygomycetes groups of fungi. 6
- Discuss the different types of flagella. Also discuss the structures of flagella in Gram-positive and Gram-negative bacteria. 6
- Explain in detail the basic characteristics of the family Enterobacteriaceae. What are the important tests used to identify the bacteria belonging to Enterobacteriaceae ? 6