

Exam. Code : 107402
Subject Code : 1658

B.Sc. (Bio Technology) 2nd Semester (Batch 2021-24)
GENERAL MICROBIOLOGY-II
Paper : BTL-154

Time Allowed—3 Hours] [Maximum Marks—40

Note :— Attempt **FIVE** questions in all, selecting at least **ONE** question from each section. The **FIFTH** question may be attempted from any section. All questions carry equal marks.

SECTION—A

- I. (a) Write short notes on :
- (i) Chemostat
 - (ii) Synchronous Growth
 - (iii) Doubling time
 - (iv) Diauxic growth. 4×1
- (b) Mention the differences between endospore and vegetative cell. 4
- II. (a) Draw a typical bacterial growth curve and label the various phases. Discuss those factors which determine the beginning and end of each phase. 5
- (b) Describe labeled structure of bacterial endospore and explain germination of an endospore. 3

SECTION—B

- III. (a) Define Virus. Give a brief description on cultivation of viruses. 4
- (b) Write short note on classification of viruses based on differences in their transcription process (Baltimore System). 4
- IV. What are bacteriophages ? Discuss in brief the structure and life cycle of bacteriophage (Lytic Cycle). 8

SECTION—C

- V. (a) What is microbial pathogenicity ? Describe the process of adhesion of microbial pathogens. 4
- (b) What are non-specific defence mechanisms of body ? Explain in detail how microorganisms are ingested and digested during phagocytosis. 4
- VI. Give in detail the mechanism of action, diagnosis and treatment for bacterial disease Typhoid. 8

SECTION—D

- VII. What is Sauerkraut ? Enlist the microorganisms involved in the production of Sauerkraut. 8
- VIII. Define Antibiotics. Discuss in detail fermentation process of Penicillin production. 8