

Exam. Code : 210002

Subject Code : 4216

M.Sc. (Botany) 2nd Semester

GENERAL MICROBIOLOGY

Paper : BOTC-523

Time Allowed—3 Hours] [Maximum Marks—50

Note :—(1) There are **four** sections. Answer any **five** questions, taking at least **one** question from each section.

(2) **Fifth** question may be taken from any section.

(3) All questions carry equal marks.

SECTION—A

- I. (a) Discuss in detail the basic principles of microscopy and micrometry.
- (b) What is pure culture ? How can we obtain pure culture ?
- (c) Give various staining methods. 10
- II. (a) Give a detailed account of classification of bacteria.
- (b) Describe the process of conjugation, transformation and transduction. 10

SECTION—B

- III. (a) Discuss in detail nomenclature and classification of plant viruses.
- (b) Describe Viroids and origin of viruses.
- (c) Give morphology and nature of virus particles. 10

- IV. (a) Give a detailed account of transmission of plant viruses.
- (b) Describe the process of infection and replication with reference to TMV. 10

SECTION—C

- V. (a) Discuss Ecological impact of raw sewage on receiving water.
- (b) Describe Bioremediation. 10
- VI. (a) Give a detailed account of Aeromicrobiology.
- (b) Describe the process of total coliform bacteria analysis. 10

SECTION—D

- VII. (a) Discuss in detail Human insulin.
- (b) Describe Primary and Secondary metabolites. 10
- VIII.(a) Give a detailed account of transmission of plant viruses.
- (b) Describe the control of microorganisms by physical and chemical means. 10