



AF-3553

M.Sc. (Final)
Term End Examination, 2017-18

MICROBIOLOGY

Paper - III

Microbial Physiology and Development

Time : Three Hours] [Maximum Marks : 100
[Minimum Pass Marks : 36

Note : Answer **all** questions. All questions carry equal marks.

Unit-I

1. Describe in detail the various laws of thermodynamics. Elaborate the concept of thermodynamics in living system.

OR

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(Turn Over)

(2)

Describe in detail the various types of systems. Relate the concept of free energy with entropy and enthalpy.

Unit-II

2. Describe in detail the process of methanogenesis and explain its environmental consequences.

OR

Describe in detail C₃ and C₄ pathway along with their significance.

Unit-III

3. Describe in detail the Embden-Mayerhof pathway and its biological significance.

OR

Describe in detail the Homo and Heterolactic acid fermentation and its importance.

Unit-IV

4. Describe the process of Nitrogen fixation and its further cycling.

OR

Describe in detail the structure of endospore, its properties and germination.

(3)

Unit-V

5. Describe in detail the multicellular organisation in microbes.

OR

Describe in detail the microbial dormancy.
