

DM-117

December-2017

B.Sc., Sem.-I

**CC-3 : Microbiology Paper-101
(Introduction to Microbial World)**

Seat No. : _____

Time : 3 Hours]

[Max. Marks : 70

- Instructions :**
- (1) All questions are compulsory and carries equal marks.
 - (2) Question number must be shown correctly in margin against the answer.

1. Write note on any two :

- (1) Describe Koch's postulates. Why are pure cultures important to Koch's postulates ? 14
- (2) Explain contribution of Louis Pasteur and John Tyndall in establishment of the theory of biogenesis.
- (3) Write contribution of Edward Jenner and Louis Pasteur in development of vaccines.
- (4) Write contribution of Winogradsky and Beijerinck in study of microbial ecology.

2. Explain the following : (any two)

- (1) Distribution of micro-organisms in extreme habitat. 14
- (2) Common prokaryotic cell shapes with their typical arrangements.
- (3) Typical characteristics of algae.
- (4) Viroids and prions.

3. Answer any two :

- (1) Discuss environmental microbiology and its significance. 14
- (2) Write applications of genetic engineering.
- (3) Enlist and explain various methods used to obtain pure cultures.
- (4) Explain different techniques used for the preservation of micro-organisms.

4. Write note on any two :

- (1) Magnification and resolving power of a microscope.
- (2) Principles and applications of phase contrast microscope.
- (3) Leucocompounds and their uses.
- (4) Mordant and their applications.

5. Answer briefly :

- (1) Write contribution of Elie Metchnikoff.
 - (2) Who discovered anti-biotic streptomycin ?
 - (3) Define virus.
 - (4) What is mesophile ?
 - (5) What is nature of bacterial ribosome ?
 - (6) What is yeast ?
 - (7) What is plasmid ?
 - (8) Write two applications of biotechnology.
 - (9) Define axenic culture.
 - (10) Write full form of ATCC.
 - (11) Define Magnification.
 - (12) Write two applications of electron microscopy.
 - (13) What is secondary stain ?
 - (14) Give two names of chemical fixatives.
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