

Roll No.

Total No. of Pages : 02

Total No. of Questions : 09

B.Sc. (Microbiology) (Sem.-2)

**BACTERIOLOGY**

Subject Code : BSMB201-19

M.Code : 79872

Date of Examination : 04-07-22

Time : 3 Hrs.

Max. Marks : 60

**INSTRUCTIONS TO CANDIDATES :**

1. SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.
2. SECTION-B contains FIVE questions carrying FIVE marks each and students have to attempt any FOUR questions.
3. SECTION-C contains THREE questions carrying TEN marks each and students have to attempt any TWO questions.

**SECTION-A**

1. Write briefly :

- a) Endoflagella
- b) Confocal microscopy
- c) Non-culturable bacteria
- d) Pure culture isolation
- e) Chemically defined media
- f) Gram-negative cell walls
- g) Sulfolobus
- h) General characteristics of Archaeobacteria
- i) Serial dilution
- j) Osmotic pressure.

## SECTION-B

2. Explain logarithmic representation of bacterial populations, phases of growth, calculation of generation time and specific growth rate.
3. Elaborate cultivation, maintenance and preservation/stocking of pure cultures.
4. Describe effect of antibiotics and enzymes on the cell wall.
5. Write a brief note on Fluorescence Microscope, Confocal microscopy, Scanning and Transmission Electron Microscope.
6. Describe morphology, ecological significance and economic importance of Gram Positive Bacteria.

## SECTION-C

7. Discuss general characteristics and phylogenetic overview of genera belonging to Nanoarchaeota (Nanoarchaeum), Crenarchaeota (Sulfolobus, Thermoproteus) and Euryarchaeota.
8. Write a note on culture media: chemically defined media, complex media, selective, differential, indicator, enriched and enrichment media.
9. Describe composition and detailed structure of Gram-positive and Gram-negative cell walls, Archaeobacterial cell wall bacteria.

**NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.**