

2103000202030064
EXAMINATION FEBRUARY-MARCH 2024
BACHELOR OF SCIENCE (SECOND SEMESTER)
MICROBIOLOGY PAPER-III
(MB-201-PROCARYOTIC AND ARCHAEL
CELL STRUCTURE)

[Time: As Per Schedule]

[Max. Marks: 50]

Instructions:

1. Fill up strictly the following details on your answer book

- a. Name of the Examination : **BACHELOR OF SCIENCE (SECOND SEMESTER)**
 - b. Name of the Subject : **MICROBIOLOGY PAPER-III (MB-201-PROCARYOTIC AND ARCHAEL CELL STRUCTURE)**
 - c. Subject Code No : **2103000202030064**
2. Sketch neat and labelled diagram wherever necessary.
 3. Figures to the right indicate full marks of the question.
 4. All questions are compulsory.

Seat No:

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Student's Signature

Q.1 Give specific answers.

12

- a. State the composition of: i) Capsule ii) Gas Vesicles
- b. Give any two examples of rod shaped bacteria.
- c. Explain the meaning of Peptidoglycan.
- d. What are NAPS? State their significance.
- e. State any two characteristics of gliding procaryotes.
- f. What do you mean by taxis? State any two types of it.

Q.2 Explain/comment on any two of the following. 12

- a. Justify: Morphology is not a trivial feature of a microbial cell.
- b. Comment on the relationship of the bacterial cell wall to the Gram stain.
- c. Some of the Aquatic bacteria orient themselves in Earth's magnetic field.

Q.3 Answer any two of the following. 16

- a. Discuss the structure and functions of cytoplasmic membrane.
- b. Explain the structure and significance of bacterial endospores.
- c. Compare the flagella of Bacteria and Archaea in terms of their structure and function.

Q.4 Write short note on any two of the following. 10

- a. Phototaxis
- b. Bacterial ribosomes
- c. Differentiate: Fimbriae & Pili
