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RAN-2403000502026001

F. Y. B. Sc. (NCF- NEP) (Sem. : II) Examination April - 2025

MB-MJ-202 (Major - 2- Microbiology) Paper - IV Theory

Bacterial and Archaeal Cell Structure and Function

Time: 1 hr 30 minutes]

[Total Marks: 38

સૂચના : / Instructions

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નીચે દર્શાવેલ નિશાનીવાળી વિગતો ઉત્તરવહી પર અવશ્ય લખવી.

Fill up strictly the details of signs on your answer book

Name of the Examination:

F. Y. B. Sc. (NCF- NEP) (Sem. : II)

Name of the Subject :

**MB-MJ-202 (Major - 2- Microbiology) Paper - IV Theory
Bacterial and Archaeal Cell Structure and Function**

Subject Code No.: **2403000502026001**

Seat No.:

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Student's Signature

- (2) Figures to the right indicate full marks of the question.
(3) Draw neat and labelled diagrams whenever necessary.

Q.1 Give Specific answers (Any Eight) :

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- State the function of bacterial ribosomes.
- Which is the largest known chemolithotrophic prokaryotic cell?
- Which porin protein do aid water export and import in *Escherichia coli*?
- Give one example of the bacterial cell wall destroying agent.
- How does scotophobotaxis differ from true phototaxis?
- What is the chemical composition of flagella?
- What are three major types of cell morphologies?
- What type of lipid is found in archaeal cell membrane?
- Which surface structure does help in bacterial attachment and conjugation?

Q.2 Explain any One of the following:

10

- Write a detailed note on Endospore.
- Explain in detail Cell Inclusion bodies.

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Q.3 Explain any Two of the following: 10

- a. Discuss how bacterial cell membrane differs from archaeal cell membrane.
- b. Describe in brief LPS layer.
- c. Elaborate the structure of cell wall of bacteria.

Q.4 Explain any Two of the following: 10

- a. Write a note on mechanism of gliding motility.
 - b. Give your views on chemotaxis
 - c. Discuss flagellar movement and synthesis
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