



RAN - 2503000502026003

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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: 1.30 Hours]

[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.: **2503000502026003**

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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- a. Which term is used to describe cocci shaped bacteria forming three dimensional cubes?
- b. What is the relationship between cell size and S/V ratio?
- c. What is periplasmic space?
- d. Give example of the microorganisms that naturally lack cell wall.
- e. Define: Osmotaxis.
- f. State the force provides energy for rotation of flagellum.
- g. Enlist the endospore forming bacteria.
- h. What is peptidoglycan?
- i. What do you call bacteria with flagella all over their surface?

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[P.T.O.]

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- Q.2. Explain any Two of the following: 10**
- a. Discuss the structure of Gas Vesicles.
 - b. Describe Magnetosomes
 - c. Explain in brief about the structure and functions of bacterial ribosomes.
- Q.3. Explain any One of the following: 10**
- a. Write a detailed note on archael cell wall.
 - b. Explain in detail structure of bacterial cell membrane.
- Q.4. Explain any Two of the following: 10**
- a. How do bacterial flagella differ from archael flagella.
 - b. Describe gliding motility
 - c. Write a short note on phototaxis
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