

RAN-2503000504028001
S.Y.B.Sc. (Sem.-IV) Examination April - 2026
Bioscience (Microbiology) - Microbial Physiology (Major-II-BM-MJ-402)
Time: 1 Hour]
[Total Marks: 25

સૂચના : / Instructions (1) ઉપરોક્ત દર્શાવેલ વિગતો ઉત્તરવહી પર અવશ્ય લખવી. Fill up strictly the above details on your answer book (2) Draw neat and labelled diagrams wherever necessary. (3) Figures to the right indicate full marks of the question	Seat No.: Student's Signature
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Q. 1 Multiple choice questions. (Any Five)
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1. Nichrome loop wire is used in which of the following techniques?
 - a. Pour-plate
 - b. Streak-plate
 - c. Spread-plate
 - d. Roll-tube technique
2. Which of the following is energy dependent?
 - a. Active transport
 - b. Primary active transport
 - c. Secondary active transport
 - d. All
3. The preservation by liquid Nitrogen is called as _____
 - a. Cryopreservation
 - b. Lyophilization
 - c. Freeze-drying
 - d. Desiccation
4. Lag phase is also known as _____
 - a. period of initial adjustment
 - b. transitional period
 - c. generation time
 - d. period of rapid growth
5. Which of the following instrument is used for the bacterial count?
 - a. Petroff-Hausser counting chamber
 - b. Microscope
 - c. Chemostat
 - d. Turbidostat
6. Transfer of genetic material from the donor to recipient bacterium through cell contact is termed as
 - a. Transduction
 - b. Recombination
 - c. Conjugation
 - d. Transformation

Q.2. Explain in detail how nutrients are taken up by bacterial cells. **10**

OR

Q.2. Answer the following questions. **10**

1. Describe in brief about culture media.
2. Write a note on growth factors.

Q.3. Discuss in detail about bacterial growth curve **10**

OR

Q.3. Answer the following questions. **10**

1. Write a note on viable count method.
2. Describe in brief about the factors affecting the microbial growth.
