

Seat No. **OCT\_NOV\_2024 WINTER EXAMINATION**

2354 Bachelor of Science

Sub. Name: MICROBIOLOGY - V (MICROBIAL PHYSIOLOGY &amp; METABOLISM)

Sub. Code: 91572

Day and Date: JANUARY ,25-01-2025

Total Marks: 40

Time: 10:30 AM To 12:00 PM

- Instructions: 1. All questions are compulsory  
2. Draw neat labelled diagrams wherever necessary

Q1) Rewrite the following sentences by selecting the correct answer from the given [8] alternatives.

- i. Swelling of cell due to hypotonic solution is known as-----
  - A. Plasmoptysis
  - B. Plasmolysis
  - C. Bursting
  - D. Swelling
- ii. The growth rate and death rate are equal in-----.
  - A. Log phase
  - B. Lag phase
  - C. Stationary phase
  - D. Death phase
- iii. In the-----environment the concentration of solute in environment is higher than cytoplasm
  - A. Hypotonic
  - B. Hypertonic
  - C. Isotonic
  - D. None of these
- iv. ----- growth is characterized by double growth cycle consisting of two exponential phases separated by a distinct log phase
  - A. Synchronous
  - B. Continuous
  - C. Diauxic
  - D. Polysaccharides
- v. Molecules such as water enters the cell by process of -----
  - A. Diffusion
  - B. Active transport
  - C. Group translocation
  - D. Passive diffusion

[1]

P.T.O

- vi. ----- pathway is involved in NADPH production.
- EMP
  - ED
  - HMP
  - Homolactic fermentation
- vii. In glycolysis-----ATP molecules are produced by substrate level phosphorylation
- 3
  - 2
  - 4
  - 5
- viii. -----nature of enzymes cause their denaturation at higher temperature.
- Thermolabile
  - Thermophiles
  - Thermostable
  - Thermoduric

## Q2) Long Answer Questions. (Attempt Any Two)

[16]

- 1) What is growth? Describe in detail about different types of growth phases.
- 2) Explain in detail Krebs cycle
- 3) Describe catabolism of glucose by EMP pathway.

## Q3) Short Note (Attempt Any Four)

[16]

- Continuous growth
- D value
- Effect of salt concentration on growth of bacteria
- Oxidative Stages in Hexose Monophosphate Pathway
- Simple Diffusion
- Fermentation

## End Of Question Paper

Important Note for Chief Exam Officer / SRPD Coordinator / Sr Supervisor/ Student -  
 This Question Paper may be distributed for following Subjects as common code.  
 सद्यः प्रश्नपत्रिका खालील विषयांकरिता वितरित करता येईल.