

B.Sc. (Part I I) (Semester IV)(NEP) Examination Mar/Apr-2024

Balasaheb Desai College, Patan

Microbiology

Subject Code – 91572

Microbial Physiology & Metabolism (Paper –V)

Day and Date –
Time -

Marks- 40
Period- 2 hours
Pages- 2

- Instruction -** 1) *All the questions are compulsory.*
2) *Figures to the right indicate full marks.*
3) *Draw neat labelled diagrams wherever necessary.*

Q.1 Rewrite the following sentences choosing the correct alternatives given below. 8

1. The growth phase where number of cell increase exponential is called-----
A) Log B) lag C) stationary D) death
2. In Preparatory phase of glycolysis consumes.....molecules for glucose degradation.
A) GTP B) ATP C) NADH₂ D) None of these
3. Example of UV resistant bacteria.
A) Micrococcus radiodurans B) Boda marina C) Halophilusendolithus D) E. coli.
4. The organisms that grow at acidic pH (0 to 5.5) are called as
A) Neutrophils B) Acidophilus C) Alkalophiles D) None of these
5. Shrinkage of cell due to hypotonic solution is known as.....
A) Plasmoptysis B) Plasmolysis C) Bursting D) swelling
6. Is final electron acceptor in aerobic respiration?
A) SO₄ - B) NO₃ -- C) Fe³⁺ + D) O₂
7. The 2-Keto-3- deoxy-6-phosphogluconate (KDPG) is formed in pathway.
A) EMP B) ED C) HMP D) Homolactic fermentation
8. Microbial growth curve shows a ----- curve
A) Bell shape B) Hypertonic C) Parabolic D) sigmoidal

Q.2. Attempt following question (Any Two)

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1. Describe HMP pathway of Glucose catabolism.
2. Give an account on transport across cell membrane.
3. What is oxidative phosphorylation? Explain ATP generation by oxidative phosphorylation.

Q.3. Write short notes on (Any Four)

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1. Effect of heavy metal.
2. Synchronous growth.
3. Fermentation.
4. Diauxic growth.
5. Electron transport chain.
6. Active transport.