RAN-2103000205021053

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T.Y.B.Sc. (Sem. V) Examination October - 2023

Bioscience (Microbiology)

BS-503 : Microbial Metabolism

Time: 2 Hours] **[Total Marks: 50**

સૂચના : / Instructions

(૧) નીચે દર્શાવેલ ☛ નિશાનીવાળી વિગતો ઉત્તરવહી પર અવશ્ય લખવી.
Fill up strictly the details of ☛ signs on your answer book

Name of the Examination:

☛ **T.Y.B.Sc. (Sem. V)**

Name of the Subject :

☛ **Bioscience (Microbiology) BS-503 : Microbial Metabolism**

Subject Code No.: **2103000205021053**

Seat No.:

Student's Signature

(2) Figures to the right indicate full marks.
(3) Draw neat & clean diagram wherever necessary.

Q. 1 Multiple choice questions: **08**

1. Chemoorganotrophic fueling process includes _____
   a. Aerobic respiration b. Anaerobic respiration
   c. Fermentation d. All
2. Which of the following is the type of fermentation?
   a. Mix acid b. Lactic acid
   c. Formic acid d. All
3. Which of the following is not involved in ETC?
   a. Ubiquinone b. Cytochrome
   c. NAD+ d. $NADH_2$
4. End products of HMP are _____
   a. Pentose sugar b. Fatty acid
   c. Amino acid d. All
5. What is transamination?
   a. Removal of amino group b. Removal of carboxyl group
   c. Removal of nitro group d. None

6. Which is the first step of beta oxidation of fatty acid?
   a. Hydration b. Oxidation of FAD
   c. Oxidation of NAD d. Cleavage
7. What is the precursor for glucose synthesis?
   a. Amino acid b. Lactate
   c. Pyruvate d. All
8. The process of Reductive TCA is _____
   a. Reversal of glycolysis b. Reversal of ETC
   c. Reversal of Kerb's cycle d. None

Q. 2 [A] Answer as directed: **04**

1. Define : Metabolism
2. Give the full form of ETC, HMP
3. What is nitrification?
4. Give any two examples of transaminase enzymes.

[B] Write short note on Any Two. **10**

1. Anaerobic respiration.
2. Glycogenesis.
3. Deamination.

Q. 3 Answer the following questions. **14**

1. Explain in brief stages of aerobic respiration.
2. Describe in brief Chemoorganotrophic fuelling

OR

Q. 3 Write an essay on - Common metabolic pathway. **14**

Q. 4 Discuss in detail about oxidation of fatty acids. **14**

OR

Q. 4 Answer the following questions. **14**

1. Describe in brief Gluconeogenesis.
2. Write a note on Transamination.

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