

B.Sc. Semester - 3 (CBCS) Examination
Oct/Nov - 2023 [NEW COURSE]
BioTechnology-BT301(Core)

Time: 2:30 Hours**Marks: 70****Instructions:**

1. All questions are compulsory.
2. Figures to the right indicate marks.

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- Que.1(A) Answer the following. (Any one Out of Two) (07)
1. Write short note on: M-M constant equation.
 2. Elaborate: Mechanism of Enzyme Regulation.
- Que.1(B) Attempt any one. (Out of Two) (04)
1. Explain: Biocatalyst and Chemical Catalyst.
 2. Discuss: linear transformation of the equation.
- Que.1(C) Attempt any three. (Out of Five) (03)
1. Explain: Allosteric Enzyme.
 2. Define: Covalent Catalysis.
 3. Provide a Definition of Enzymes.
 4. Write the full form of M-M constant.
 5. Beta carotene is coenzyme of vitamin A. (True/False)
- Que.2(A) Answer the following. (Any one Out of Two) (07)
1. Write detailed note on Glycolysis cycle.
 2. Discuss in detail: Oxidative Phosphorylation.
- Que.2(B) Attempt any one. (Out of Two) (04)
1. Describe in short: Gluconeogenesis.
 2. Discuss: Citric Acid cycle.
- Que.2(C) Attempt any three. (Out of Five) (03)
1. Full form of ETC.
 2. Define: Lipid Metabolism.
 3. Write the key enzyme involved in beta oxidation of fatty acids.
 4. Oxaloacetic acid is first product of citric acid cycle. (True/False).
 5. _____ number of net ATP are generated after one glycolysis cycle.
- Que.3(A) Answer the following. (Any one Out of Two) (07)
1. Explain in brief: Inborn Errors of Metabolism.
 2. Elaborate in-depth: Purine and Pyrimidine Synthesis.
- Que.3(B) Attempt any one. (Out of Two) (04)
1. Short note on Urea Cycle.
 2. Write the brief about types Photosynthesis.
- Que.3(C) Attempt any three. (Out of Five) (03)
1. What is Alpha helix?
 2. Define: Deamination?
 3. Write the full form of DNA.
 4. Provide a two-line explanation of proteins.
 5. Transamination means amine group is removed from a Amino acid. (True/False)
- Que.4(A) Answer the following. (Any one Out of Two) (07)
1. Detailed note on: Plant Hormones.
 2. Write the short note on: Various types of Animal Hormones.

- Que.4(B) Attempt any one. (Out of Two) (04)
1. Explain in short: Exocrine.
 2. Short note on functions of plant hormones.
- Que.4(C) Attempt any three. (Out of Five) (03)
1. Explain: Endocrine
 2. Write the full name of IAA.
 3. Auxin is animal hormone. (True/False)
 4.plant hormone is found in the gaseous state.
 5. _____ part of body secreted bile. (Pancreas, Liver)
- Que.5(A) Answer the following. (Any one Out of Two) (07)
1. Discuss: Regulation of cell cycle by protein kinase.
 2. Write the detailed note on Composition of membrane.
- Que.5(B) Attempt any one. (Out of Two) (04)
1. Write in short: ATP dependant transport system.
 2. Give the basic overview of indirect transport.
- Que.5(C) Attempt any three. (Out of Five) (03)
1. What is uniport?
 2. Explain: paracrine.
 3. Define: Signal transduction.
 4.types of cell signalling are in living cell. (One, Two, Three)
 5. Cell signalling is a process by which cells communicate. (True/False)
