

B.Sc. Semester - 3 (NEP-2020) Examination**OCT/NOV-2024****BIT: Metabolism and Plant Tissue Culture (Major-6)****Time: 2:00 Hours****Marks: 50****Instructions:**

1. All questions are compulsory.
 2. Figures to the right indicate marks.
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- Que-1 Answer the following questions. (10)
- 1) Explain in detail about Tricarboxylic acid cycle.
 - 2) Describe β oxidation of lipid molecules.
- OR
- 1) Explain Gluconeogenesis in detail.
 - 2) What is ETC? Explain in detail.
- Que-2 Answer the following questions. (10)
- 1) What is Transamination and Deamination? Explain its detail with example.
 - 2) Explain metabolism of protein by Urea cycle.
- OR
- 1) Describe DE novo pathway of Purine synthesis.
 - 2) Write a note on photosynthesis reactions.
- Que-3 Answer the following questions. (10)
- 1) What is Signal transduction? Explain cascade of Signal transduction.
 - 2) Explain activity of protein kinase for cell cycle regulation.
- OR
- 1) Different way of solute transport across membrane.
 - 2) Explain in detail about signal transduction by hormones.
- Que-4 Answer the following questions. (10)
- 1) List Out Media additives and Explain in detail.
 - 2) Advantage and Disadvantages of Tissue culture.
- OR
- 1) Differentiate between Macro and Micro Nutrients
 - 2) Define Totipotency. Explain different concept of Totipotency in detail.
- Que-5 Answer the following questions. (10)
- 1) write a note on HMP Shunt
 - 2) Salvage pathway of Pyrimidine synthesis
- OR
- 1) Describe Functions and architecture of Cell Membrane.
 - 2) Define plant growth regulators. Explain their functional role in plant growth promotion.
