

M.Sc.-I (Botany) (CBCS Pattern) Semester - II
PSCBOTT05 - Plant Physiology and Biochemistry

P. Pages : 1

Time : Three Hours



GUG/S/23/11195

Max. Marks : 80

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- Notes : 1. All questions are compulsory and carry equal marks.
2. Draw well labeled wherever necessary.

1. Describe evolution of photosynthetic apparatus with special emphasis on photosynthetic pigments. Describe the Mechanism of electron transport in detail. **16**
- OR**
- a) CAM pathway and its importance. **8**
- b) ATP Synthesis in chloroplast. **8**
2. What is Respiration ? Describe its substrate, types and mechanism in detail. **16**
- OR**
- a) Oxidative pentose phosphate pathway. **8**
- b) Plant mitochondrial electron transport. **8**
3. What is nitrogen fixation and describes its types giving special emphasis on Biological Nitrogen fixation by symbiotic bacteria. **16**
- OR**
- a) General classification and properties of starch and sucrose. **8**
- b) GS/GOGAT Cycle. **8**
4. What is Enzyme ? Describe its nomenclature, classification, properties and mechanism of action. **16**
- OR**
- a) Source and sink mechanism for phloem. **8**
- b) Mechanism of water transport through xylem. **8**
5. Write short notes on –
- a) Photo protective mechanism. **4**
- b) Factor affecting the rate of Respiration. **4**
- c) Synthesis of membrane lipids. **4**
- d) Enzyme – Activators & Inhibitors. **4**
