

M.Sc.(Botany) New CBCS Pattern Semester-II  
**PSCBOTT05 - Paper-V : Plant Physiology and Biochemistry**

P. Pages : 1

Time : Three Hours



**GUG/W/23/11195**

Max. Marks : 80

- Notes : 1. All questions are compulsory and carry equal marks.  
2. Draw well-labelled diagrams by giving suitable example.

1. What is photosynthesis? Write about photosynthetic pigments. Write note on light harvesting complex. **16**

**OR**

Write on:-

- a) ATP synthesis in Chloroplast and Mitochondria. **8**  
b) C<sub>3</sub> and C<sub>4</sub> pathway. **8**

2. What is respiration? Write about Glycolysis. Add note on factors affecting the rate of respiration. **16**

**OR**

Write on:-

- a) Measurement of Respiratory quotient. **8**  
b) Pentose phosphate pathway. **8**

3. Write about general classification and properties of lipids. **16**

**OR**

Write on:-

- a) Classification of carbohydrates. **8**  
b) GOGAT cycle. **8**

4. What are enzymes? Write about mode and mechanism of Enzyme action. **16**

**OR**

Write on:-

- a) Mechanism of water transport through xylem. **8**  
b) Mechanism of translocation in phloem. **8**

5. Write short notes on:

- a) Photorespiration. **4**  
b) Oxidative enzymes. **4**  
c) Biological Nitrogen fixation. **4**  
d) Factors affecting enzyme activity. **4**

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