

TDC Odd Semester Exam., 2020
held in July, 2021

BOTANY

(Honours)

(3rd Semester)

Course No. : BOTH-301

(Plant Physiology and Biochemistry)

Full Marks : 35

Pass Marks : 12

Time : 2 hours

*The figures in the margin indicate full marks
for the questions*

Answer **five** questions, taking **one** from each Unit

UNIT—I

1. Define transpiration. What are the factors responsible for transpiration? 2+5=7
2. Write notes on the following : 3½+3½=7
 - (a) Osmosis
 - (b) Water potential

UNIT—II

3. Discuss the role of macro-and micro-nutrient in plant growth and development. 7
4. Discuss the theories related to absorption of mineral nutrients. Which is the most accepted theory? 5+2=7

UNIT—III

5. Write short notes on the following : 3½+3½=7
 - (a) Photosynthetic apparatus
 - (b) Electron transport pathway
6. With a neat sketch, discuss the Z-scheme of Calvin's cycle. 7

UNIT—IV

7. Explain the mechanism of translocation of solute through phloem. Support your answer with a neat diagram. 5+2=7
8. Write notes on the following : 3½+3½=7
 - (a) Source-sink relationship
 - (b) Function of phloem

(3)

UNIT—V

9. Define anaerobic respiration. What are the steps involved in glycolysis? $2+5=7$
10. Write short notes on the following : $3\frac{1}{2}+3\frac{1}{2}=7$
- (a) Cyanide-resistant respiration
- (b) TCA cycle

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