

**M.Sc. BOTANY
THIRD SEMESTER
BIOCHEMISTRY AND PLANT PHYSIOLOGY
MSB-304B**

**SET
A**

[USE OMR FOR OBJECTIVE PART]

Duration: 1.30 hrs.

Full Marks: 35

Time: 15 min.

(Objective)

Marks: 10

1X10=10

Choose the correct answer from the following:

- Sugar translocation is increased by the application of
 - K
 - N
 - P
 - B
- Photosynthesis is a
 - Reductive process
 - Endergonic process
 - Anabolic process
 - All of these
- The light reaction occurs in
 - Stroma
 - Whole chloroplast
 - Grana
 - Both a and b
- Which of the following equation is correct?
 - $DPD = O.P - T.P$
 - $DPD = O.P + T.P$
 - $DPD = O.P \times T.P$
 - None of these
- Hill reaction is related to
 - Photosynthesis
 - Respiration
 - Photorespiration
 - Photolysis of water
- A hypotonic solution means
 - Weak solution
 - Strong solution
 - Both a and b
 - Higher sugar containing solution
- Which nutrient is evolved in chlorophyll structure?
 - Mn
 - S
 - Mg
 - Mo
- Major limiting factor in C₃ plants is
 - Light
 - Carbondioxide
 - Temperature
 - All of these

9. High levels of potassium reduce the uptake of _____.
- | | |
|--------------|-----------------|
| a. Magnesium | b. calcium |
| c. Zinc | d. All of these |
10. The light in which maximum photosynthesis occurs is
- | | |
|----------|---------|
| a. Black | b. Red |
| c. Green | d. Blue |

(Descriptive)

Time: 1 hrs. 15 min.

Marks : 25

[Answer question no.1 & any two (2) from the rest]

1. Write the mechanism of solute translocation with pressure flow hypothesis. 5
2. Write the significance of transpiration .Explain the mechanism of transpiration with any one theory. 4+6=10
3. Write the differences between C_3 and C_4 pathways of carbon fixation. 10
4. What is red drop? Write the difference between cyclic and non cyclic photophosphorylation. 3+7=10
5. Write short note on(Any two) 5+5=10
 - a. Contact Exchange Theory
 - b. The carrier concept
 - c. Chlorophyll pigments

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