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FIRST YEAR (B.Sc. Biotechnology)
24BIO12101: Plant Science
(Semester II)

Program: B.Sc. Biotech (04)
Program Specific: B.Sc. Biotechnology
Course Type: Minor
Paper:

Credits: 2
Time: 2 Hours
Max. Marks: 30
SET: A

Instructions to the candidate:

- 1) All questions are compulsory.
- 2) Figures to the right indicate full marks.
- 3) Draw a well labelled diagram wherever necessary.

Q1) Attempt ANY SIX of the following:

[6 X 2 = 12]

- a) Differentiate between photophosphorylation and photorespiration.
- b) State four modifications of root for food storage.
- c) Define transpiration. Give its significance.
- d) Draw the structure of chloroplast.
- e) What is translocation in phloem?
- f) Differentiate between simple and complex permanent tissues.
- g) What is osmotic pressure? Give its formula.
- h) Compare wall pressure and turgor pressure.

Q2) Attempt ANY THREE of the following:

[4 X 3 = 12]

- a) "Water in plants is transported through xylem." Explain.
- b) Write a short note on- Auxins and its importance.
- c) Give the brief account on the types and functions of vacuoles.
- d) With the help of a diagram discuss the organization of shoot apical meristem.
- e) Give the characteristic features of monocots.

Q3) Attempt ANY TWO of the following:

[2 X 3 = 06]

- a) With the help of a diagram describe the structure of flower.
- b) Give the reactions of the preparatory phase of glycolysis in plants.
- c) Discuss the process of phloem loading and unloading in detail.
- d) Explain the C4 pathway in detail.
