



GIET UNIVERSITY, GUNUPUR – 765022

Ph.D. (Second Semester) Examinations, November – 2023

WPPEB02012 – Advanced Plant Physiology and Biochemistry (Botany)

Time: 3 hrs

Maximum: 70 Marks

The figures in the right hand margin indicate marks.

Answer ANY FIVE Questions

(14 x 5 = 70 Marks)

	Marks
1.a. Write the first and second law of thermodynamics.	7
b. Discuss about the C ₄ mode of carbon fixation in plants.	7
2.a. What are the light harvesting complexes in green leaves? Describe in details	7
b. Illustrate on various theories of opening and closing of stomata.	7
3.a. Write on significance of glycolysis? Add a notes on formation of Acetyl CoA..	7
b. Describe in details on degradation of cellulose in plant cell.	7
4.a. Give a brief idea on pectin biosynthesis in plant.	7
b. Give an account of importance of alkaloids of plants.	7
5.a. Explain in details on biosynthesis of terpenes.	7
b. Explain the carbohydrate metabolisms in green plant.	7
6.a. Give an account of integration of nitrogen metabolism and carbohydrate metabolism.	7
b. Describe the assimilation of nitrate and ammonium ion by the plant from soil.	7
7 a. Explain the importance nitrogen in plant.	7
b. Give an account of causes and methods of breaking of seed dormancy.	7
8 a. Write on source, types and importance of auxin.	7
b. Explain the mechanism of resistant to biotic stress and abiotic stress by plant.	7

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