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GIET UNIVERSITY, GUNUPUR – 765022

Ph.D. (Second Semester) Examinations, April – 2024

PPEBO2012 - 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. Name the types of bonding present in macromolecules. Discuss in details about them.	7
b. Write in detail about C3 mode of carbon fixation.	7
2.a. Explain the first and second law of thermodynamics. How the principles of thermodynamics are operating in living cells?	7
b. Authenticate that Krebs cycle is a hub for metabolism.	7
3.a. Describe on types of alkaloids found in plants.	7
b. Give an account of importance of alkaloids of plants.	7
4.a. Describe the nitrogen cycle with suitable diagram.	7
b. Give an account of relation between amino acid synthesis and Krebs cycle.	7
5.a. Describe the physiology of seed germination.	7
b. Give an account of response of plant to biotic stress.	7
6.a. Describe the process of water absorption of in plants.	7
b. Write in brief on the degradation of starch in plant.	7
7.a. Give an account of integration of nitrogen metabolism and carbohydrate metabolism.	7
b. Write on physiological and molecular action of auxins.	7
8.a. Give an account of Physiology and flowering in plant.	7
b. Discuss briefly about the pectin biosynthesis in cell.	7

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