



'समानो मन्त्रः समितिः समानी'

UNIVERSITY OF NORTH BENGAL
B.Sc. Honours 5th Semester Examination, 2022

CC11-TEA SCIENCE

PLANT PHYSIOLOGY AND METABOLISM

Time Allotted: 2 Hours

Full Marks: 40

The figures in the margin indicate full marks.

1. Answer any **five** from the following: 1×5 = 5
- (a) What is entropy?
 - (b) Name the plant hormone found in gaseous form.
 - (c) What is vernalization?
 - (d) Give an example of synthetic auxin.
 - (e) Name the first stable product of C₃ cycle.
 - (f) What is the photochemical reaction centre of PS II?
 - (g) Name one symbiotic nitrogen fixing bacteria.
 - (h) Write the name of any short day plant.
2. Answer any **three** from the following: 5×3 = 15
- (a) Describe the role of Auxins in plant growth.
 - (b) Why is abscisic acid also known as stress hormone?
 - (c) Write the difference between active and passive transport in plants.
 - (d) Differentiate between C₃ and C₄ plants.
 - (e) Write a short note on Photoperiodism.
 - (f) Schematically represent the fate of pyruvic acid in aerobic respiration.
3. Answer any **two** from the following: 10×2 = 20
- (a) Briefly explain the laws of thermodynamics.
 - (b) What are the physiological effects of ethylene—plant hormone?
 - (c) Write a detail account on the photoexcitation of chlorophyll and electron transport chain in photosynthesis.
 - (d) What is dormancy? Briefly discuss different types of dormancy. Write the causes of seed dormancy and discuss the methods to break seed dormancy. 1+2+7

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