



বিদ্যাসাগর বিশ্ববিদ্যালয়
VIDYASAGAR UNIVERSITY

Question Paper

B.Sc. Honours Examinations 2020

(Under CBCS Pattern)

Semester - V

Subject: BOTANY

Paper : C 12-T & C 12-P

Plant Physiology

Full Marks : 60 (Theory : 40 + Practical : 20)

Time : 3 Hours

Candidates are required to give their answer in their own words as far as practicable.

The figures in the margin indicate full marks.

C 12-T [Theory]

Answer *any two* of the following:

2x20=40

1. a. What are the differences between macro- and micronutrients?
- b. Define transpiration.
- c. What is pressure–flow model? State the process of phloem loading and unloading.
- d. Write down the process of ion transport across cell membrane. 3+3+6+8
2. a. Write the function of chelating agents.
- b. State two roles of jasmonic acid.

- c. Write a short note on mechanism of stomatal movement.
- d. Write the physiological roles of auxins as plant growth regulator. 3+3+6+8
3. a. Write a brief note on florigen concept.
- b. What is ascent of sap? Explain cohesion-tension theory.
- c. What is HIR?
- d. Distinguish symport and antiport. 6+7+3+4
4. a. State two roles of cytokinins.
- b. What is the role of aquaporin?
- c. State the physiological roles of brassinosteroids.
- d. Write about the bioassay and physiological roles of cytokinins. 3+3+6+8

C 12-P [Practical]

Answer *any one* of the following:

1x20=20

1. a. Describe the process for determination of osmotic potential of plant cell sap.
- b. Calculate the stomatal index and stomatal frequency of leaves of a xerophyte. 10+10
2. a. Write down the method for determination of water potential of potato tuber by weight method.
- b. Write down the different events of seed germination. 10+10
3. a. Write down the experiment for study of the effect of light on the rate of transpiration in excised twig.
- b. Write down the experiment to study the induction of amylase activity in germinating barley grains. 10+10
