

Botany [Honours]

[CBCS]

B.Sc. Fifth Semester End Examination-2023

(Regular & Supplementary Paper)

PAPER-C12T

PLANT PHYSIOLOGY

Full Marks: 40

Time: 02 Hrs

The figures in the right hand margin indicate marks

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

Illustrate the answers wherever necessary

Group A

- 1) Answer any FIVE questions of the following: **5x2= 10**
- What is the role of antitranspirants?
 - Write two physiological functions of Brassinosteroids .
 - Define photoperiodism.
 - What do you mean by triple response?
 - What is the practical utility of vernalization?
 - Who proposed the Cohesion-Tension theory? Name an anti transpirant.
 - What are aquaporins?
 - What are the functions of Boron in plants?

(2)

Group B

2. Answer any FOUR questions of the following: **4x5 = 20**

- a) Write down the cotransport mechanism of phloem translocation.
Why this phenomenon is called energy driven transport? 4+1
- b) Write down the short note on
- i) Facilitated diffusion and
 - ii) Source-sink relationship 2+3
- c) Draw a schematic structure of an ATPase pump. What is chelating agent? 4+1
- d) State the factor affecting transpiration rate in plants.
- e) What are the physiological role of Auxin? What is florigen?
- f) What are the factors responsible for seed dormancy? What is photomorphogenesis? 4+1

Group C

3. Answer any ONE question of the following: **1x10 = 10**

- a) What is the chemical nature of gibberellin? Write the function of ABSCISIC ACID INSENSITIVE 3 (ABI3). Describe the role of phytochrome in flowering. 4+4+2
- b) Write short notes on-
- i) Physiological role of Jasmonic acid
 - ii) Cohesion-Tension theory.
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