



K23U 1107

Reg. No. :

Name :

IV Semester B.Sc. Degree (CBCSS – OBE – Regular/Supplementary/
Improvement) Examination, April 2023
(2019 Admission Onwards)
COMPLEMENTARY ELECTIVE COURSE IN BOTANY
4C04BOT : Plant Physiology, Ecology and Applied Botany

Time : 3 Hours

Max. Marks : 40

Instruction : Draw diagrams wherever specified.

PART – A

Objective type questions. Answer **all**.

(4×1=4)

1. Select an essential element for the plant growth
a) N b) Zn
c) Mn d) Fe
2. The reaction centre in cyclic photophosphorylation is
a) P680 b) P750
c) P700 d) P690
3. Velamen roots are seen in
a) Hydrophytes b) Halophytes
c) Epiphytes d) Xerophytes
4. The hormone helps in fruit ripening
a) Auxin b) Gibberellins
c) IAA d) Ethylene

PART – B

Short essay questions. Answer **any eight**.

(8×2=16)

5. What is genetically modified crop ?
6. Differentiate diffusion from osmosis.
7. Define antagonism in plants.
8. Write a note on T-budding.

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9. What is pressure-flow hypothesis ?
10. Write two functions of auxin.
11. Write short notes on anti-transpirants.
12. What is water potential ?
13. What are hydathodes ?
14. What is Emerson's enhancement effect ?
15. What are CAM plants ?
16. Differentiate hypertonic and isotonic solution.

PART – C

Essay questions. Answer **any four**.

(4×3=12)

17. Describe the processes of abscission.
18. What are synthetic hormones ? Write two examples.
19. Describe K⁺ ion theory.
20. Transpiration is necessary evil. Explain briefly.
21. Briefly describe C₄ cycle and its significance.
22. Explain the factors affecting photosynthesis.

PART – D

Long essay questions. Answer **any one**.

(1×8=8)

23. Explain the morphological, physiological and anatomical adaptations of xerophytes.
24. Explain the role of micro and macro nutrients in plants.
25. Explain the process of dark reaction in photosynthesis.