



K24U 0711

Reg. No. : .....

Name : .....

IV Semester B.Sc. Degree (CBCSS – OBE – Regular/Supplementary/  
Improvement) Examination, April 2024  
(2019 to 2022 Admissions)  
**COMPLEMENTARY ELECTIVE COURSE IN BOTANY FOR B.SC.  
ZOOLOGY AND FORESTRY**  
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. Raisins when soaked in water swell up due to
  - a) Imbibition
  - b) Exosmosis
  - c) Endosmosis
  - d) Diffusion
2. Flowering and ripening of fruits are induced by
  - a) Auxin
  - b) Gibberellin
  - c) Cytokinin
  - d) Ethylene
3. Phylloides and cladodes are generally observed in
  - a) Hydrophytes
  - b) Xerophytes
  - c) Parasites
  - d) Saprophytes
4. In photosynthesis the photolysis of water and evolution of O<sub>2</sub> takes place during
  - a) Cyclic electron transport
  - b) Non-cyclic electron transport
  - c) C<sub>3</sub> Cycle
  - d) C<sub>4</sub> Cycle

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## PART – B

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

(8×2=16)

5. Give a brief account on myrmecophily. Cite suitable example.
6. What is seed dormancy ? Mention its significance.
7. Differentiate between cyclic and non-cyclic electron transport in photosynthesis.
8. Give an account on symbiotic N<sub>2</sub> fixation in plants.
9. List out any two micro nutrients. Comment on the deficiency symptoms.
10. Raw mangoes get shrivel when pickled. Explain reason.
11. Give a brief note on the structure of hydathodes.
12. Comment on mutualistic plant animal interactions.
13. Explain methods of plant introduction.
14. Write a brief note on the law of limiting factors.
15. Briefly explain the production of golden rice.
16. What is Diffusion Pressure Deficit (DPD) ? How will you calculate DPD of a plant tissue ?

## PART – C

Essay questions. Answer **any four**.

(4×3=12)

17. Describe the mechanism of water absorption by roots of higher plants.
18. Explain the steps of hybridisation in detail. Cite an example.
19. Transpiration is considered as a necessary evil. Justify the statement citing its beneficial and harmful effects.



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20. Write an account on naturally occurring growth inhibitors in plants. Discuss their role.
21. Explain the morphological and anatomical adaptations in epiphytes.
22. Explain CAM pathway. List the special features.

## PART – D

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

(1×8=8)

23. Explain the pathway of carbon in photosynthesis.
24. Give a detailed account on the mechanism of absorption of mineral nutrients in plants.
25. What is ecological succession ? Explain its stages citing hydrosere as example.