

C 21515

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Name.....

Reg. No.....

## FOURTH SEMESTER (CBCSS—UG) EXAMINATION, APRIL 2022

Botany

BOT4C04—PLANT PHYSIOLOGY, ECOLOGY AND GENETICS

(2019 Admission onwards)

Time : Two Hours

Maximum : 60 Marks

## Section A

*Answer atleast eight questions.**Each question carries 3 marks.**All questions can be attended.**Overall ceiling 24.*

1. Write notes on water potential and its significance.
2. Discuss the role of magnesium in plants.
3. Define osmosis. Comment on its significance.
4. Write about action spectrum and absorption spectrum.
5. What are the major processes taking place during light phase ?
6. Distinguish scarification and stratification.
7. Write a brief note on synthetic auxins.
8. Write notes on senescence and abscission.
9. Define hydrosere. Which are the different stages ?
10. What are pneumatophores ? Give an example.
11. What is test cross ? How does it differ from back cross ?
12. Distinguish genotype and phenotype.

(8 × 3 = 24 marks)

Turn over

**Section B**

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*Answer atleast five questions.  
Each question carries 5 marks.  
All questions can be attended.  
Overall ceiling 25.*

13. Explain transpiration pull theory in detail.
14. Discuss the significance of transpiration.
15. What is vernalization ? Discuss its importance in plants.
16. Discuss the role of cytokinins in plant development.
17. Write an account on the ecological adaptations found in xerophytes.
18. What is epistasis ? Explain with fruit colour in Cucurbita as an example.
19. Write about Mendel's experiments on monohybrid cross.

(5 × 5 = 25 marks)

**Section C**

*Answer any one question.  
The question carries 11 marks.*

20. Write a detailed account on Calvin cycle.
21. Explain the concept of ecosystem and its biotic and abiotic components.

(1 × 11 = 11 marks)