



K23U 2330

Reg. No. :

Name :

**V Semester B.Sc. Degree (C.B.C.S.S. – O.B.E. – Regular/Supplementary/
Improvement) Examination, November 2023
(2019 – 2021 Admissions)
Core Course in Botany/Plant Science
5B07BOT/PLS – PLANT PHYSIOLOGY AND METABOLISM**

Time : 3 Hours

Max. Marks : 40



PART – A

(Objective Type Questions)

Answer **all**.

(4×1=4)

- Premature fall of leaves is due to
a) Decrease in Auxin
b) Increase in Auxin
c) Increase in Ethylene
d) None of the above
- Magnesium is an important constituent of
a) Cytochromes
b) Chlorophyll
c) Carotenes
d) Phaeophytin
- Guttation occurs through
a) Lenticels
b) Stomata
c) Hydathodes
d) Both b) and c)
- Dry seeds when placed on moist substratum absorb water and swell up due to
a) Imbibition
b) Diffusion
c) Exosmosis
d) Endosmosis

P.T.O.



PART – B
(Short Essay Questions)

Answer **any eight**.

(8×2=16)

5. Explain osmotic potential.
6. What are essential elements ?
7. Explain vital movements in plants.
8. Write notes on isoenzymes.
9. What are monosaccharides ? Give example.
10. Distinguish between apoplast and symplast.
11. Comment on deficiency diseases.
12. Explain Fluorescence.
13. What is Respiratory Quotient ?
14. Comment on phytochromes.
15. What is meant by enzyme inhibition ?
16. Describe renaturation of proteins.

PART – C
(Essay Questions)

Answer **any four**.

(4×3=12)

17. Write a brief account on the physiological roles of auxin.
18. Give a brief account on ascent of sap.
19. Write short notes on vernalization.
20. Explain the factors affecting enzyme activity.
21. Comment on Glycogen and its role in plant growth.
22. Give a brief account on secondary metabolites and their types.

PART – D
(Long Essay Questions)

Answer **any one**.

(1×8=8)

23. Describe the Calvin cycle. Add notes on the factors affecting photosynthesis.
24. Write an account on lipids, its classification and biological functions.
25. Give a detailed account on absorption of water, its mechanism and the factors affecting the process.