



QP CODE: 22000477



22000477

Reg No :

Name :

MSc DEGREE (CSS) EXAMINATION , JANUARY 2022

Second Semester

M Sc BOTANY

CORE - BY010203 - PLANT PHYSIOLOGY AND BIOCHEMISTRY

2019 Admission Onwards

C07A16B9

Time: 3 Hours

Weightage: 30

Part A (Short Answer Questions)

*Answer any **eight** questions.*

Weight 1 each.

1. Distinguish between primary and secondary active transports.
2. What are the three stages of Calvin cycle?
3. Comment on Substrate level phosphorylation and oxidative phosphorylation.
4. Comment on nitrogenase enzyme.
5. What is hardening?
6. Differentiate aldose from ketose.
7. What are triglycerides?
8. Write notes on naming of enzymes.
9. How enzyme activity is expressed?
10. What is non-competetive inhibition?

(8×1=8 weightage)

Part B (Short Essay/Problems)

*Answer any **six** questions.*

Weight 2 each.

11. Explain Cotransport and countertransport.
12. Describe on membrane transporters.
13. Explain photoinhibition and its photoprotective mechanisms.
14. Describe the Rotenone insensitive pathway in plants.





15. Explain the structure and function of phytochromes.
16. Describe the importance of buffers in biochemical experiments.
17. Explain glyoxylate cycle.
18. Write a short note on classification of amino acids

(6×2=12 weightage)

Part C (Essay Type Questions)

*Answer any **two** questions.*

*Weight **5** each.*

19. Explain in detail, the mechanism of electron transport and photophosphorylation during photosynthesis.
20. Give a detailed comparison on mitochondrial and chloroplast ATP synthesis .
21. Give a detailed account on plant stress physiology, sensing and response mechanism.
22. Explain the biosynthesis and function of terpenoids, alkaloids and phenolics in plants.

(2×5=10 weightage)

