



QP CODE: 25047429



Reg No :

Name :

M.Sc DEGREE (CSS) EXAMINATION, NOVEMBER 2025

Third Semester

M Sc BIOCHEMISTRY

Core Course - BC010302 - PLANT BIOCHEMISTRY

2019 ADMISSION ONWARDS

3F6CE978

Time: 3 Hours

Weightage: 30

Part A (Short Answer Questions)

*Answer any **eight** questions.*

Weight 1 each.

1. Illustrate thylakoid membrane protein complexes.
2. Why is Hatch & Slack Pathway also called C₄ Cycle?
3. What is biological nitrogen fixation?
4. Distinguish between nitrite reductase and nitrate reductase.
5. Explain the degradation of ABA in plants.
6. Name a phytohormone which is in gaseous form. List its role in plant life.
7. What do you understand by biotic stresses?
8. Examine how plants prevent the autotoxicity of cyanogenic glycosides and HCN.
9. What are gums? Explain its role as a secondary metabolite.
10. Outline the structure of Azadirachtin.

(8×1=8 weightage)

Part B (Short Essay/Problems)

*Answer any **six** questions.*

Weight 2 each.

11. Give an account of chemiosmotic coupling hypothesis.
12. What are Nif genes? Briefly discuss on their regulation.
13. What are the important glutamate synthase isoenzymes?
14. Write a short note on auxins.
15. Examine the physiological effects of cytokines in plant life.





16. Outline the structures of some common synthetic auxins and their functions.
17. Explain the Shikimate/Arogenate pathway.
18. Explain in detail on how plant lectins are useful in purification of glycans.

(6×2=12 weightage)

Part C (Essay Type Questions)

*Answer any **two** questions.*

Weight 5 each.

19. Explain Hatch and Slack pathway. Give its significance.
20. Summarize the process of water and mineral balance in plants.
21. What are growth regulating substances? Explain the role of gibberellins in the growth of plants.
22. Classify alkaloids. Discuss their biological role in plant life.

(2×5=10 weightage)

