

25021224



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Reg. No.....

Name.....

**M.Sc. (BIOCHEMISTRY) DEGREE (C.S.S.) EXAMINATION, FEBRUARY 2025**

Third Semester

BC3M003 PC10—PLANT BIOCHEMISTRY

(2018 Admissions—First Mercy Chance/2017 Admissions—Second Mercy Chance, 2016 Admissions—Third mercy Chance and 2015 Admissions—Last and Final Special Mercy Chance)

[2012—2018 Admissions]

Time : Three Hours

Maximum Weight : 30

**Part A (Short Answer Type)**

*Answer any **five** of the following.*

*Weight 1 each.*

1. What is Hill Reaction ? What is its significance ?
2. In C4 plants, Give the Primary carboxylation reaction and name the enzyme responsible for the reaction.
3. What are non protein amino acids ? Give two examples and their function.
4. Name two vitamins that have terpenoids in their structure
5. What are the functions of abscisic acid ?
6. What are the non biological processes of atmospheric nitrogen fixation ?
7. What are Phenolics ? Give an example and its function.
8. "Curcumin is a non flavonoid poly phenol": Justify

(5 × 1 = 5)

**Turn over**





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**Part B (Short Essay Type)**

*Answer any **five** of the following.*

*Weight 2 each*

9. What is the role of Light Harvesting Antenna complex in photosynthesis ?
10. What is meant by compensation point ? Explain.
11. What are the enzymes involved in ammonia utilization in plants ?
12. What are Terpenoids ? Indicate the linkage of isoprene units in a mono terpene.
13. Give the reaction of Nitrogenase complex. What is the energetic of the reaction from Nitrogen to Ammonia ?
14. Explain the uptake and utilization of Nitrate in plants.
15. What is the function of Glutamate dehydrogenase ? How is it regulated ?
16. Name three macro mineral nutrients of plants. What is their importance for the plant ?

(5 × 2 = 10)

**Part C (Long Essay Type)**

*Answer any **three** of the following.*

*Weight 5 each.*

17. Explain the cyclic and non cyclic electron flow during photosynthesis. What is the function of Cyt b/f complex ?
18. Give the reactions of the C3 cycle.
19. Give a brief account of abiotic stress response in plants.
20. Give an account of the uses of secondary metabolites to man.
21. What is the role of RuBisCO in photorespiration ? Give the reactions of photorespiration and factors that affect the process.
22. What are True and Pseudo alkaloids ? Give the occurrence and applications of pharmacologically important alkaloids isolated from plants.

(3 × 5 = 15)

