Botany

QP CODE: 20000768

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Reg No : .....

Name : .....

MSc DEGREE (CSS) EXAMINATION , NOVEMBER 2020

Second Semester

M Sc BOTANY

CORE - BY010203 - PLANT PHYSIOLOGY AND BIOCHEMISTRY

2019 Admission Onwards

5ADD0BF4

Time: 3 Hours

Weightage: 30

Part A (Short Answer Questions)

Answer any **eight** questions.

Weight **1** each.

1. What are aquaporins?
2. What are ABC transporters?
3. Comment on alternate oxidase.
4. What are nodulation genes?
5. What is oxidative stress?
6. What are organic acids? Give a example.
7. What are polyunsaturated fatty acids?
8. What is saponification?
9. What are regulatory enzymes?
10. What are abzymes?

(8×1=8 weightage)

Part B (Short Essay/Problems)

Answer any **six** questions.

Weight **2** each.

11. Describe pathways of water uptake and its transport in plants.
12. Describe the structuire and function of RuBisCO.
13. Describe the steps involved for sucrose synthesis in plants.

14. Write short note on complex I and complex II seen in plant mitochondria.

15. Write notes on structure and function of cryptochromes.

16. Explain the degradation of protein molecules in the cell.

17. Explain the Lineweaver-Burk plot.

18. Write a short note on classification of secondary metabolites.

(6×2=12 weightage)

Part C (Essay Type Questions)

Answer any **two** questions.

Weight **5** each.

19. Using the structure of PSI and PSII, describe the detailed mechanism of elctron transport in photosynthesis.

20. Give a detailed comparison on mitochondrial and chloroplast ATP synthesis .

21. Give a detailed account on plant growth regulators emphasising on its mechanism of action and its effect.

22. How substrate concentration affect the activity of enzyme mediated reaction? Also explain the Michaelis-Menten equation.

(2×5=10 weightage)