Botory



**QP CODE: 20000768** 

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Reg No

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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.

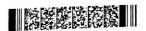
- 1. What are aquaporins?
- 2. What are ABC transporters?
- 3. Comment on alternate oxidase.
- 4. What are nodulation genes?
- 5. What is oxidative stress?
- 6. What are organic acids? Give a example.
- 7. What are polyunsaturated fatty acids?
- 8. What is saponification?
- 9. What are regulatory enzymes?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

 $(8 \times 1 = 8 \text{ weightage})$ 

#### 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.

 $(6 \times 2 = 12 \text{ weightage})$ 

# 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.

 $(2 \times 5 = 10 \text{ weightage})$ 

