

TM153045A

Reg. No:.....

Name:

M. Sc. DEGREE (C.S.S.) EXAMINATION, OCTOBER 2016
SEMESTER III - BOTANY
BO3C10TM - PLANT PHYSIOLOGY AND BIOCHEMISTRY

Time: Three Hours

Maximum Marks: 75

PART A

I. Answer any five questions. Each question carries 3 marks

1. What do understand on the role of mycorrhiza in nutrient uptake of plants?
2. What is the significance of photorespiration?
3. Explain terminal oxidation
4. Give a brief account of the physiology behind floral induction
5. What are storage lipids? How they are different from structural lipids?
6. What is IUB system of enzyme classification?
7. Explain salvage pathways

(5x3=15)

PART B

II. Answer any six questions. Each question carries 5 marks

8. What is the mechanism operated in the transport of molecules in the xylem and phloem?
9. Give an account on photo inhibition and its tolerance mechanism
10. Explain substrate level phosphorylation. How it is different from photo phosphorylation?
11. Explain the events associated with the development of root nodules in leguminous plants
12. What are phytochromes? Explain briefly the role of phytochromes in plant responses
13. Explain the role of pH in life
14. Write an account on oligosaccharides citing two examples
15. Briefly explain the various mechanisms involved in the regulation of enzyme activity
16. What are secondary metabolites? How they are synthesized?

(6x5=30)

PART C

III. Answer any two questions. Each question carries 15 marks

17. Critically examine the mechanism of carbon fixation in different types of plants you have studied
18. What do you understand by abiotic stress? Explain in detail the mechanism of tolerance by plants to water, temperature, salinity and air pollution stresses
19. What are sugar derivatives? Give the structure and significance of glycoproteins, proteoglycans and mucoproteins in plants
20. Write an essay on the structure and role of co-enzymes? Explain its relevance in plant life

(2x15=30)