

**17P337**

(Pages: 2)

Name: .....

Reg. No.....

**THIRD SEMESTER M.Sc. DEGREE EXAMINATION, NOVEMBER 2018**

(Regular/Supplementary/Improvement)

(CUCSS - PG)

**CC15P BO3 C09 - PLANT PHYSIOLOGY, METABOLISM AND BIOCHEMISTRY**

(Botany)

(2015 Admission onwards)

Time : Three Hours

Maximum : 36 Weightage

I. Answer *all* questions. Each question carries 1 weightage.

1. What is meant by source and sink in translocation?
2. Describe GOGAT pathway.
3. Differentiate between phytochromes and cytochromes.
4. Write a note on hydrogen bonding in water.
5. What is solute potential?
6. Ecological significance of CAM pathway.
7. Write down the Michaelis-Menton equation.
8. What are allosteric enzymes?
9. Write notes on glycosides.
10. What is gluconeogenesis?
11. Mention the significance of PRPP.
12. What is isoelectric point of amino acids?
13. Differentiate denaturation from renaturation of proteins.
14. What are the anapleurotic reactions of Krebs cycle?

**(14 x 1 = 14 Weightage)**

II. Answer any *seven* questions. Each question carries 2 weightage.

15. Differentiate C3 plants from C4 plants.
16. Explain about stress physiology in plants by drought and salinity.
17. Mechanism of mineral ion absorption of plants.
18. Explain Z-Scheme with schematic representation.
19. Describe  $\beta$ -oxidation of fatty acids.
20. Explain the importance of NDP sugars in metabolism.
21. Explain the mechanism of enzyme action.
22. Describe the fate of pyruvic acid.
23. Write an account on response of Plants to Auxin.

24. Describe the three dimensional structure of proteins.

**(7 x 2 = 14 Weightage)**

III. Answer any *two* questions. Each question carries 4 weightage.

25. Describe the translocation in plants.

26. Describe the classification of carbohydrates? Write a note on biologically important carbohydrates.

27. Explain ETS. Discuss the protein complexes taking part in electron transport system.  
Write a note on oxidative phosphorylation and chemi osmotic coupling.

28. Elucidate the biosynthesis of purines and pyrimidines.

**(2 x 4 = 8 Weightage)**

\*\*\*\*\*