

Name:..... Reg. No.....**15U237**

B. Sc. DEGREE END SEMESTER EXAMINATION, MARCH 2016

(2015 Admission)

**SEMESTER -2: BOTANY (COMPLEMENTARY COURSE FOR
ZOOLOGY)**

COURSE: 15U2CPBOT2 - PLANT PHYSIOLOGY

Time: Three Hours

Maximum Marks: 60

PART A

Answer **all** questions; each question carries one mark.

1. What is vernalin?
2. Define ascent of sap.
3. Define D P D
4. What is meant by Kranz anatomy?.
5. Define turgor pressure
6. What is guttation?
7. What is meant by transpiration pull ?
8. What is incipient plasmolysis?

(1 x 8 = 8)

PART B

Answer **any six** questions; each question carries two marks

9. Explain photophosphorylation
10. Explain how the structure of stomata suits its function?
11. Describe the structure and function of photosystems .
12. What are primary and accessory pigments?
13. Write a short note on RUBISCO.
14. Describe electromagnetic spectrum
15. What are the changes occurring during senescence?
16. Describe absorption spectrum and action spectrum
17. Explain the mechanism of water absorption in plants.
Explain the significance of photolysis of water?

(2 x 6 = 12)

PART C

Answer **any four** questions; each question carries four marks.

18. Describe the theories on mechanism of working of stomata

19. Explain the properties of water that enable passive uptake by plants
20. Describe the carboxylating enzymes in photosynthesis in plant
21. Point out the differences between C₃ and C₄ cycle.
22. Describe the radial translocation of water in plant tissues
23. Describe the factors affecting transpiration.

(4 x 4 = 16)

Part D

Answer **any two** questions; each question carries twelve marks.

24. Give an illustrated account of light reaction in green plants.
OR
25. Describe the photomorphogenetic responses in plants.
26. Explain the C₄ pathway with emphasis on its biological significance
OR
27. Describe nitrogen cycle with emphasis on its biological significance.
(12 x 2 = 24)
