B.Sc. DEGREE END SEMESTER EXAMINATION - MARCH/APRIL 2019

SEMESTER – 2: BOTANY (COMPLEMENTARY FOR ZOOLOGY)

COURSE: **15U2CPBOT2, PLANT PHYSIOLOGY**

(Common for Regular 2018 admission and improvement/supplementary 2017/2016/2015 admission)

Time: Three Hours   Max. Marks: 60

PART A

I. *Answer **ALL** questions; each question carries **1** mark.*

1. Expand ABA
2. What is Senescence
3. What is Diffusion pressure deficit?
4. Name a stress protien?
5. What is photoblastism
6. What is vernalization
7. What is plasmolysis?
8. What are pneumatophores?   (1 x 8 = 8)

PART B

II. *Answer **ANY SIX** questions; each question carries **2** marks.*

9. Differentiate between Osmotic Pressure and Osmotic Potential
10. What are the significance of transpiration.
11. Describe Red drop.
12. Differentiate between Imbibition and Diffusion
13. What is guttation? Give example
14. 'All elements that are present in a plant need not be essential to its survival'. Comment.
15. Describe Krantz anatomy.
16. What causes the opening and closing of guard cells of stomata during transpiration?
17. What are the factors affecting the rate of diffusion?
18. What role does root pressure play in water movement in plants?   (2 x 6 = 12)

PART C

III. *Answer **ANY FOUR** questions; each question carries **4** marks.*

19. Explain non-cyclic photophosphorylation with help of a schematic diagram
20. Briefly describe water potential. What are the factors affecting it?
21. Why is abscisic acid also known as stress hormone?

22. Why is that in certain plants deficiency symptoms appear first in younger parts of the plant while in others they do so in mature organs?

23. Explain the different methods to break seed dormancy.

24. Explain Munch mass flow of hypothesis   (4 x 4 = 16)

PART D

IV. *Answer **ANY TWO** questions; each question carries **12** marks.*

25. How are the minerals absorbed by the plants?

OR

26. Explain Nitrogen cycle with the help of a schematic representation

27. Describe the various steps involved in C3 cycle.

OR

28. What are the different types of tropic and nastic movements in plants? Give examples

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