

**B. Sc. DEGREE (C.B.C.S.S.) EXAMINATION, APRIL 2018**  
**(2014 Admission Supplementary)**  
**SEMESTER II - COMPLEMENTARY COURSE (BOTANY)**  
**BOT2PP - PLANT PHYSIOLOGY**  
**(For Zoology)**

**Time: Three Hours**

**Maximum Marks: 60**

**PART A**

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

1. Explain the importance of transpiration.
2. Define stress physiology.
3. What is Solar spectrum?
4. Comment on Nitrogen cycle
5. Explain Blackmans law of limiting factors.
6. What is seed dormancy?
7. What is Devernalization?
8. What is Warburg effect?

**(8×1=8)**

**PART B**

**II. Answer any six questions. Each question carries 2 marks**

9. Differentiate between active and passive absorption.
10. Briefly explain ringing experiment.
11. Differentiate between endosmosis and exosmosis.
12. Describe two methods for measurement of growth.
13. What is electron transport system?
14. What is photophosphorylation?
15. Draw a neat labelled diagram of a hydathode.
16. What are circadian rhythms?
17. Write an account on photoinductive cycles.
18. Differentiate between tactic and trophic movements in plants.

**(6×2=12)**

**PART C**

**III. Answer any four questions. Each question carries 4 marks**

19. Explain photorespiration.
20. Differentiate between salt tolerance and salt avoidance.
21. Explain Red drop and Emerson's enhancement effect.
22. Write the phenomenon of vernalization in higher plants and its importance in a tropical country like India
23. Explain geotropism with suitable examples.
24. Explain the mechanism of stomatal transpiration.

**(4×4=16)**

## PART D

### IV. Answer any two questions. Each question carries 12 marks

25. Define growth. Describe the sigmoid curve with a diagram. Explain the factors affecting growth.
26. What is photoperiodism? Explain the physiology of photoperiodism in plants? Add notes on its significance in agriculture.
27. What is the role of nitrogen in the life of plants? What are its sources? Explain the mechanism of its absorption and utilization in plants.
28. Translocation of food takes place through phloem. Justify.

**(2x12=24)**