

B.Sc. 5th Semester (Honours) Examination, 2019-20**BOTANY****Course ID : 51312****Course Code : SHBOT/502/C-12**

Course Title: Plant Physiology

Time: 1 Hour 15 Minutes**Full Marks: 25**

*The figures in the margin indicate full marks.
Candidates are required to give their answers in
their own words as far as practicable.*

1. Answer *any five* of the following: 1×5=5
- (a) What happens when a turgid cell is immersed into a hypertonic solution?
 - (b) Why are microelements often called trace elements?
 - (c) What do you mean by vernalization?
 - (d) Write down the fullform of 2,4-D.
 - (e) Define antiport.
 - (f) What do you mean by diffusion pressure deficit?
 - (g) Mention one natural and one synthetic member of IAA.
 - (h) What is HIR?
2. Answer *any two* of the following: 5×2=10
- (a) Briefly elaborate the mechanism of water absorption by plant root. What is meant by facilitated diffusion? 4+1=5
 - (b) Write down the criteria of essentiality of mineral elements. Enumerate the physiological roles performed by Boron and Magnesium in green plants. 2+(1½+1½)=5
 - (c) Elucidate the chemical nature of phytochrome and discuss its role in the flowering of angiosperms. 3+2=5
 - (d) Describe briefly the phloem loading mechanism in plants. 5
3. Answer *any one* of the following: 10×1=10
- (a) Distinguish between primary and secondary dormancy of seeds. Write down in brief the important methods of breaking seed dormancy. Mention the significance of seed dormancy. 2+6+2=10
 - (b) Briefly describe the physiological role of cytokinin in growth and development of plants. What is antitranspirant? Discuss the role of potassium ion in stomatal opening and closing. 6+2+2=10
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