



K21P 0963

Reg. No. : .....

Name : .....

**III Semester M.Sc. Degree (CBSS – Reg. /Suppl. / Imp.) Examination, October 2021**  
**(2018 Admission Onwards)**  
**BOTANY**  
**BOT 3C10 : Plant Physiology**

Time : 3 Hours

Max. Marks : 60

**Instructions :** Draw diagrams *whenever necessary*.

**SECTION – A**

**(2×8=16)**

1. a) Write an account on types of stresses, plant responses and resistance to stress.

OR

- b) Explain electron transport system and chemi – osmotic mechanism of ATP formation in Photosynthesis.

2. a) Explain the Soil – Plant – Atmosphere continuum.

OR

- b) Describe the ultra-structure of chloroplast.

**SECTION – B**

**(2×6=12)**

Answer **any two**.

3. a) What is seed dormancy ?  
b) Explain the mechanisms to break dormancy.  
c) Write a note on mobilization of stored reserves during seed germination. **(1+2+3)**
4. a) What is a climateric fruit ?  
b) What are the different stages of the growth and development of fruit ?  
c) Briefly explain the major changes of fruit ripening. **(1+2+3)**
5. a) What is transpiration ?  
b) How stomata control leaf transpiration ?  
c) Write a short note on physiological adaptations of desert plants to minimizing transpiration. **(1+2+3)**

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**SECTION – C**

**(6×3=18)**

Answer **any six**.

6. Differentiate passive diffusion and facilitated diffusion.  
7. Explain photorespiration and its significance.  
8. Explain nutrient cycle.  
9. Write a note on cyanide resistant respiration.  
10. Define growth and explain the growth curve.  
11. What are phytochromes ? Role of phytochromes on flower initiation.  
12. Explain briefly the physiological effects of auxins in plant growth.  
13. Write a note on aquaporins.

**SECTION – D**

Answer **any seven**.

14. Chemical Potential  
15. Antitranspirants  
16. Calmodulin  
17. Senescence  
18. Symport and antiport  
19. Turgor pressure  
20. Quiescence  
21. Photoblastic seeds  
22. Aleurone layer  
23. Homolactic fermentation

**(7×2=14)**

Bank