



K15P 0029

Reg. No. : .....

Name : .....

**Third Semester M.A./M.Sc./M.Com. Degree (Reg./Sup./Imp.)  
Examination, November 2015  
(2014 Admn.)  
BOTANY  
BOT 3C10 : Plant Physiology**

Time: 3 Hours

Max. Marks : 60

**Instruction : Draw diagrams wherever necessary.**

**SECTION – A**

1. a) Write a comparative on stomatal transpiration in  $C_3$  and  $C_4$  plants.

OR

b) Describe the active transport process in plants.

2. a) Explain electron transport system.

OR

b) Describe the mechanism of water uptake in plants.

(2x8=16)

**SECTION – B**

Answer **any two** :

3. a) What is soil-atmosphere continuum ?

b) Describe the mechanism of water absorption in halophytes.

c) Explain cohesion-tension theory.

(1+2+3)

4. a) Define dormancy.

b) Describe types of dormancy.

c) Explain the mechanism of breaking dormancy.

(1+2+3)

5. a) What is stress ?

b) Describe plant responses to stress.

c) Add a note on physiological adaptations to stress.

(1+2+3)

(2x6=12)

P.T.O.



## SECTION - C

Answer **any six** :

6. Explain methods of determining water potential.
7. Describe ATP formation.
8. Write a note on cyanide resistant plants.
9. How do you determine the essentiality of an element ?
10. Explain the physiology of flowering.
11. Describe the phases of growth.
12. Explain nutrient cycling.
13. Write a note on effect of salt stress on plants.

**(6×3=18)**

## SECTION - D

Answer **any seven** :

14. Hygroscopic water
15. Antitranspirants
16. Aquaporins
17. Rubisco
18. Fruit ripening
19. Photoregulation
20. Growth indices
21. Temperature stress
22. CAM plants
23. Osmosis.

**(7×2=14)**