



K17P 1243

Reg. No. :

Name :

**Third Semester M.Sc. Degree (Reg./Supple./Imp.)
Examination, November 2017
BOTANY
(2014 Admn. Onwards)
BOT 3C10 : Plant Physiology**

Time : 3 Hours

Max. Marks : 60

Instruction : Draw diagrams wherever necessary.

SECTION – A

1. a) Write an account on the mechanism of water uptake in plants.
OR
b) Describe the methods to study the essentiality of elements required for plant growth.
2. a) Explain the electron transport system and add a note on chemi-osmotic mechanism of ATP formation.
OR
b) Write on the signal transduction in eukaryotes. (2×8=16)

SECTION – B

Answer any two :

3. a) What is dormancy ?
b) Mention types of dormancy.
c) Discuss the mechanisms of breaking dormancy. (1+2+3)
4. a) Define growth.
b) Explain growth indices.
c) Describe methods of measurement of growth. (1+2+3)
5. a) Define stress.
b) Which are the indicative parameters of stress ?
c) Explain stress tolerance mechanism to water stress. (1+2+3)

(2×6=12)

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SECTION - C

Answer **any six** :

6. Explain physiological adaptations of desert plants in minimising transpiration.
7. Describe the mechanism of ion transport.
8. Explain the role of photoreceptors in energy trapping.
9. Write an anaerobic respiration.
10. Discuss the role of hormones in fruit ripening.
11. Explain respiration in the germinating seeds.
12. Write a note on antitranspirants.
13. Explain sulphur metabolism.

(6×3=18)

SECTION - D

Answer **any seven** :

14. Field capacity.
15. CAM plants.
16. Aquaporins.
17. Symport.
18. Rubisco.
19. Cyanide resistant respiration.
20. Senescence.
21. Nitrogenase.
22. Osmotons.
23. Red drop.

(7×2=14)