K19P 1074

Reg. No. : .....

Name : .....

III Semester M.Sc. Degree (CBSS-Reg./Suppl./Imp.) Examination, October - 2019

(2014 Admission Onwards)

BOTANY

BOT 3C10: PLANT PHYSIOLOGY

Time : 3 Hours Max. Marks : 60

Instructions to Candidate:

Draw diagrams wherever necessary.

SECTION - A

(2×8=16)

1. a) Write an account on stomatal transpiration in plants.

(OR)

b) Explain the methods of study the essentiality of an element to plants.

2. a) Write an account on seed dormancy and the mechanisms of breaking dormancy.

(OR)

b) Describe the mechanism of biological nitrogen fixation.

SECTION - B

(Answer any two) **(2×6=12)**

3. a) Define field capacity. **(1+3+2)**
   b) Write on soil types.
   c) Explain movement of water with in the plant.

4. a) What are aquaporins? **(1+3+2)**
   b) Explain facilitated diffusion.
   c) Write on membrane channels.

P.T.O.

5. a) Define stress. (1+2+3)
   b) What are heat shock proteins?
   c) Explain the role of tansgenesis in stress tolerance.

SECTION - C
(Answer any six) **(6×3=18)**

6. Explain the methods of determining the water potential.
7. How do you quantify hormones?
8. Describe water absorption by halophytes.
9. Explain sulphur metabolism in plants.
10. Explain the role and significance of plant growth analysis.
11. What is photorespiration? Mention its significance.
12. Explain light reaction.
13. Write on water stress effects on plants

SECTION - D
(Answer any seven) **(7×2=14)**

14. Structure of chloroplast
15. Aerobic respiration
16. CAM plants,
17. Calmodulin
18. Cyanide resistant respiration
19. ABA
20. Florigen
21. Growth curves
22. Osmotin
23. Iron
