



K18U 1441

Reg. No. :

Name :

V Semester B.Sc. Degree (CBCSS – Reg./Sup./Imp.)
Examination, November 2018
(2014 Admn. Onwards)
CORE COURSE IN BOTANY/PLANT SCIENCE
5B08 BOT/PLS : Plant Physiology and Biochemistry

Time : 3 Hours

Total Marks : 40

Instruction : Draw diagrams *wherever* necessary.

SECTION – A

Answer **all**.

Choose the correct answer.

1. Which of these is an amino acid ?
a) Tryptophan b) Magnesium c) Abscissic acid d) Lecithin
2. Dixon and Jolly are associated with
a) Absorption of water b) Ascent of sap
c) Photosynthesis d) Transpiration
3. Coiling and folding of the polypeptide chain is characteristic of
a) Primary structure b) Secondary structure
c) Tertiary structure d) Quaternary structure
4. Mimosa pudica exhibits
a) Gravitropism b) Nyctinasty
c) Seismonasty d) Phototropism

(4x1=4)

SECTION – B

Answer **any eight** of the following.

5. Differentiate between C3 and C4 plants.
6. Write an account on phytochrome.
7. Write short notes on aquaporins.

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8. What is vernalisation ?
9. Explain complex lipids.
10. What is meant by redox potential ?
11. Give the concept of water potential.
12. Explain CAM mechanism.
13. Differentiate between co enzymes and co factors.
14. Write on the morphological and biochemical changes that occur at the time of seed germination.
15. What is the role of ATP in plant metabolism ?
16. Give the significance of trace elements in plant metabolism. **(8×2=16)**

SECTION – C

Answer **any four** of the following.

17. Explain the physiological role of Gibberellins in plants.
18. Schematically represent the reactions of glycolysis.
19. Write an account on the secondary metabolites in plants.
20. What is the mechanism involved in the uptake of water in plants ?
21. Illustrate and explain the law of limiting factors.
22. Write on allosteric inhibition of enzymes. **(4×3=12)**

SECTION – D

Answer **any one**.

23. Describe the structure of nucleotides. What are the functions of nucleotides and their derivatives ?
24. Illustrate and explain non cyclic photophosphorylation. How does it differ from the cyclic process ?
25. Explain the theories of phloem transport you have studied. **(1×8=8)**