

Sixth Semester B.Sc. Degree Examination, September 2020

(CBCS Scheme)

Botany

Paper VII – PLANT PHYSIOLOGY AND METABOLISM

Time : 3 Hours]

[Max. Marks : 90

Instructions to Candidates :

- 1) Answer all Parts.
- 2) Draw labelled diagrams wherever necessary.

PART – A

I. Answer any **TEN** of the following : (10 × 2 = 20)

1. What is Hydroponics? Mention its significance.
2. Mention any two role of Auxin.
3. What is vernalisation? Mention its application.
4. Sketch and label stomatal apparatus.
5. What are CAM plants? Give an example.
6. Mention importance of water to the plant life.
7. What are Grana? Mention their function.
8. Expand NADP and FMN.
9. List any two deficiency symptoms of zinc.
10. What is Dormancy? Mention any two causes.
11. Differentiate between Ammonification and Nitrification.
12. What are Tropic movements? Mention its types.

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PART – B

II. Answer any **SIX** of the following :

(6 × 5 = 30)

13. Explain properties of Enzymes.
14. List out role and applications of cytokinins.
15. Explain components of water potential.
16. Describe anaerobic respiration.
17. Explain photoperiodism.
18. Write a note on photosynthetic pigments.
19. Explain role and deficiency symptoms of magnesium.
20. Describe Seismonasty.

PART – C

III. Answer any **FOUR** of the following :

(4 × 10 = 40)

21. Explain C₃ cycle.
22. Describe stomatal mechanism with reference to potassium ion theory.
23. Explain mechanism of enzyme action.
24. Describe pentose phosphate pathway.
25. Explain :
 - (a) Ethylene
 - (b) Phytochrome
26. Write a note on :
 - (a) Nodule formation in leguminous plants
 - (b) Methods of breaking dormancy