

Third Year B.Sc., Degree Examination
August / September 2009
Directorate of Correspondence Course
Botany

Paper - IV : Plant Physiology, Plant Breeding and Tissue Culture

Time : 3 Hours

Max. Marks : 75

- Note :** 1. **Answer all questions**
2. **Draw diagrams wherever necessary**

I. Simple answer questions :

Answer in a word, phrase or a sentence.

10x1=10

1. What is guttation?
2. What is photoperiodism?
3. Who Proposed mass flow hypothesis?
4. What is the end product of glycolysis?
5. Write the chemical equation of photosynthesis?
6. What is emasculation?
7. Give an example for seismonastic movement.
8. What is molar solution?
9. Name a gaseous hormone.
10. Give an example for asymbiotic nitrogen fixing bacteria.

II. Short answer questions.

Answer any FIVE of the following.

5x3=15

11. Write a note on factors affecting transpiration.
12. Mention any three applications of gibberellins.
13. Explain the role and deficiency symptoms of Iron.
14. Explain seed dormancy.
15. Mention any three significances of plant breeding.
16. Explain the phases of growth.
17. Describe geotropism.

III. Medium answer questions.

5x6=30

Answer any FIVE of the following

18. Describe the carrier concept related to absorption of minerals.
19. Explain non-cyclic photophosphorylation.
20. Give an account of application of tissue culture in Agriculture.
21. Describe cohesion- Tension (TCT) theory.
22. Explain the mechanism of stomatal movement.
23. Explain the process of osmosis with a suitable experiment.

IV. Long answer questions.

Answer any TWO of the following :

2x10=20

24. Describe the Krebs's cycle with schematic representation.
25. Describe different types of vegetative propagation.
26. Explain the Calvin cycle with schematic representation.
27. Answer the following
 - a) Embryo culture
 - b) Symbiotic nitrogen fixation

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