

2022
M.Sc.
Third Semester
CORE – 10
BOTANY
Course Code: MBOC 3.21
(Plant Physiology)

Total Mark: 70
Time: 3 hours

Pass Mark: 28

Answer five questions, taking one from each unit.

UNIT-I

1. Explain the components of water potential. Briefly explain how ascent of sap occurs in plants. 7+7=14
2. What causes biotic stress in plants? Explain the mechanisms of plant response to biotic stress. 4+10=14

UNIT-II

3. Describe the organization of photosystem and explain the mechanism of electron transport chain in chloroplast. 7+7=14
4. Explain the process of carbon fixation? Briefly discuss the regulation of rubisco activity in plants. 9+5=14

UNIT-III

5. Explain the process of glycolysis and its regulation. 10+4=14
6. Discuss the uptake and assimilation of ammonia and sulphate by plants? 7+7=14

UNIT-IV

7. List out some of the functions of gibberellin. Explain the signalling pathways of gibberellin with the help of flowchart. 4+10=14

8. Why is ethylene known as negative regulator of the receptor? Explain the mechanism of the ethylene with the help of a flowchart. $2+12=14$

UNIT-V

9. What is photoperiodism? Explain the effect of photoperiod in flowering with special reference to phytochrome. $2+12=14$
10. What is assimilate? Explain the partitioning of assimilates in plants. $2+12=14$
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