

2023
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. Discuss the mechanism of water movement in plants. How is soil-plant-atmosphere continuum maintained? 8+6=14
2. What are the consequences of water stress in plants? Explain the mechanisms of stomatal response to water stress. Comment on the potential role of resurrection plants in response to water stress. 6+6+2=14

UNIT-II

3. Discuss the causes and consequences of photoinhibition in plants. Explain the mechanisms of non-photochemical quenching. 6+8=14
4. How does photodamage to photosynthetic apparatus occur? Explain the repair mechanism of photosynthetic apparatus. 8+6=14

UNIT-III

5. Explain the process of mitochondrial electron transport and oxidative phosphorylation. 14
6. Discuss in detail the biological nitrogen fixation. 14

UNIT-IV

7. Explain the signaling pathways of cytokinin with the help of flow chart. 14
8. Explain the signaling pathways of brassinosteroids with the help of a flow chart. 14

UNIT-V

9. Define dormancy. Discuss on the type of dormancy. 2+12=14
10. What is senescence? Discuss on the different types of senescence. 2+12=14
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