

2021
M.Sc.
Third Semester
CORE – 10
BOTANY
Course Code: MBOC 3.21
(Plant Physiology)

Total Mark: 70

Pass Mark: 28

Time: 3 hours

Answer five questions, taking one from each unit.

UNIT-I

1. Using appropriate diagram explain the soil-plant-atmosphere continuum (SPAC). Briefly explain how different factors influence SPAC. 7+7=14
2. Explain the causes and plant response mechanism to 7+7=14
 - (i) Water stress
 - (ii) Temperature stress

UNIT-II

3. Give a comparative account of C₃ and C₄ carbon assimilation. 14
4. What is photoinhibition? Explain the various regulatory mechanisms to prevent photodamage and repair of photosynthetic apparatus. 2+12=14

UNIT-III

5. Explain the mitochondrial electron transport and oxidative phosphorylation. 14
6. Describe the process of biological nitrogen fixation. How do plants uptake and assimilate nitrate? 7+7=14

UNIT-IV

7. Discuss on discovery and physiological effects of cytokinin. 4+10=14
8. Write notes on 7×2=14
 - (i) Terpene
 - (ii) Phenols

UNIT-V

9. Discuss on dormancy and its types in detail.

4+10=14

10. Write notes on

7×2=14

(i) Vernalization

(ii) Senescence
