FACULTY OF SCIENCE
B.Sc. III Year Examination March / April 2015
Subject: Botany
Paper: IV

Physiology, Tissue Culture, Biotechnology Seed Technology and Horticulture

Time: 3 hours

Max. Marks: 100

Section: A (5 x 8=40)
(Short answer Questions)

Note: Answer any FIVE Questions. Attempt at least ONE Question from each unit.
Answer should not exceed 20 Lines for each question.
Draw well labeled diagrams wherever necessary.

Unit-I
1. Carrier concept.
2. What are Enzymes? Explain their Characteristics.

Unit-II
4. Physiological Effects of Abscisic acid.

Unit-III
5. Somaclonal Variants.

Unit-IV
7. Seed Certification.
8. Landscaping.

Section: B (4 x 15=60)
(Essay Type Questions)

Note: Answer ALL Questions. Answer should not Exceed 80 lines for each question.
Draw well labeled diagrams wherever necessary.

9. (a) Write an essay on Ascent of Sap.
    OR
    (b) Define Carbon Assimilation. Explain C4 Pathway. Add a note on its significance.

10. (a) What is Oxidative Phosphorylation? Explain its mechanism.
    OR
    (b) What are Phytohormones? Explain the physiological effects of auxins.

11. (a) Write an Essay on Protoplast culture
    OR
    (b) What is Biotechnology? Explain The role of Biotechnology in the fields of the medicine and industry.

12. (a) Describe the causes of seed dormancy and methods of Breaking seed Dormancy
    OR
    (b) Define Bonsai? Explain the Various styles and Training methods involved In the development of Bonsai.