

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

- 3 Glycolysis.
- 4 Physiological Effects of Abscisic acid.

Unit-III

- 5 Somaclonal Variants.
- 6 Gene cloning.

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.
