

Unit IV

8. (a) Explain various biochemical changes observed during fruit ripening. 8
- (b) Discuss the role of ethylene in fruit ripening. 8
9. (a) How the quality is maintained during post harvest storage ? 8
- (b) Discuss some of the biochemical studies carried out under different kind of storage conditions. 8



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M.Sc. EXAMINATION, 2025

(Fourth Semester)

(Regular & Re-appear)

BOTANY

Plant Growth Regulators

Time : 3 Hours]

[Maximum Marks : 80

Before answering the question-paper, candidates must ensure that they have been supplied with correct and complete question-paper. No complaint, in this regard will be entertained after the examination.

Note : Attempt *Five* questions in all, selecting *one* question from each Unit. Q. No. 1 is compulsory. All questions carry equal marks.

1. Briefly explain the following terms : **2×8=16**

- (i) Salicylic acid
- (ii) Hydrolytic enzymes
- (iii) Seed viability
- (iv) Biological aging
- (v) Pytohormones
- (vi) Preservatives
- (vii) Volatile compounds
- (viii) Climacteric fruits

Unit I

2. (a) How does cytokinins regulate plant growth ? Explain with the help of suitable examples. **8**

(b) Discuss recent advances in biosynthesis of ethylene. **8**

3. Write short notes on the mechanism of action of any *two* of the following : **16**

- (i) Absciscic acid
- (ii) Jasmonic acid
- (iii) Brassinosteroids

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Unit II

4. (a) How the food reserves are metabolized during germination of seeds ? **8**

(b) Discuss various factors responsible for breaking seed dormancy. **8**

5. Write short notes on the following : **16**

- (i) Environmental factors affecting seed viability
- (ii) Hormonal control of seed germination

Unit III

6. (a) What is the difference between senescence and ageing in plants ? **8**

(b) Explain the mechanism of leaf abscission. **8**

7. Write short notes on the following : **16**

- (i) Metabolic changes during senescence
- (ii) Physiological changes associated with fruit ripening.

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P.T.O.