

Roll No.

Total Pages : 3

CMDQ/M-24

5632

PLANT GROWTH AND DEVELOPMENT

Paper–BOT 401

Time Allowed : 3 Hours]

[Maximum Marks : 80

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

Compulsory Question

1. Write short notes on the following : 8×2=16
- (i) What is Bolting?
 - (ii) What are day Neutral plants?
 - (iii) Define crop growth rate and relative growth rate.
 - (iv) What is the role of ABA in stomatal movement?
 - (v) Define critical day length.
 - (vi) Define harvest index and leaf area index.
 - (vii) How transport of Cytokinins takes place in plants?
 - (viii) How inactivation of Gibberellins takes place in plants?

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UNIT–I

- 2. (a) Describe the methods for breaking dormancy of Seeds. 8
- (b) Describe various types of Growth curves in Plants with the help of a suitable diagrams. 8
- 3. (a) Discuss the physiological responses of Plants under salinity stress. 8
- (b) Describe the events that happens during germination of Seeds. 8

UNIT–II

- 4. (a) Discuss the role of Gibberellins in growth and development. 8
- (b) Describe the Biosynthetic pathway of auxins. 8
- 5. (a) Describe the physiological responses of Plants to ethylene. 8
- (b) Explain the mechanism of action of auxins. 8

UNIT–III

- 6. Discuss the Physiological and Biochemical changes associated with senescence in plants. 16
- 7. (a) Discuss the role of Hormones in phototropism. 8
- (b) Write an account on Nastic movements in plants. 8

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UNIT-IV

8. (a) What do you mean by Florigen? Discuss the role of Florigen in flowering. 8
- (b) Discuss the role of Vernalization in flowering. 8
9. What is Phytochrome? Describe its properties and mechanism of action. 16