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Class – M.Sc. II Sem IV Botany
Subject – St. & Metabolism of Plant Hor-
mones

Paper – BOT C–622

Time Allowed : 3 Hours

Maximum Marks : 50

Section–A

Attempt all questions. Each question carries 1 mark.

Q 1. Write short notes on following:

- (a) Bioassay
- (b) Apical dominance
- (c) Utility of Gibberellins in molting of barley
- (d) Anticytokinins
- (e) Ethepen
- (f) Systemin
- (g) Microbial genes involved in IAA & CK Biosynthesis
- (h) IBA

1 × 8 = 8

Section - B

Attempt any 7 questions. Each question carries 3 marks.

- 2. Comment how does Darwin's work on canary plant led to emergence of auxin concept.
- 3. Differentiate between plant hormones & plant growth regulators.
- 4. What are auxins? Discuss their structural diversity & physiological role in higher plants.

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5. What is 'triple response'?
6. Explain diagrammatically the Biosynthetic pathway of any stress hormone studied by you.
7. Give an account of the microbial synthesis of plant hormones & their role in tumors induction by giving suitable examples.
8. Describe briefly homeostasis of GAs in plant.
9. Give an account of physiological roles of Jasmonates.
10. Discuss briefly about discovery, distribution & structure of cytokinins.
11. Write bioassays for CKs. 7 x 3 = 21

Section - C

12. Define homeostasis. Discuss in detail various mechanism for the regulation of IAA level in plants.
13. Describe the synthesis of GAs by Terpenoid pathway. Also explain that why there are so many GAs.
14. Write short notes on the following:
 - (a) Tumor induction by Pseudomonas
 - (b) Synthetic compounds with cytokinin and GA₃ like activities.
15. Give a detailed account of defense - related phytohormone in reference to their structure, distribution, biosynthesis and physiological role.
16. (a) Write physiological roles of CKs.
(b) How level of ethylene is regulated in higher plants? 3 x 7 = 21
