

Roll No.

(07/21-II)

13652

M. Sc. EXAMINATION

(For Batch 2017 & Onwards)

(Fourth Semester)

BOTANY

BOT-402A

Plant Growth and Development

Time : Three Hours Maximum Marks : 70

Note : Attempt *Five* questions in all. Q. No. 1 is compulsory. Select *one* question from each Unit.

1. Give short answers : 5×2=10

- (a) Hypogeal Germination
- (b) Vernalization
- (c) Growth retardants

(5-11/9) B-13652

P.T.O.

- (d) Nastic movements
- (e) Critical Photoperiod

Unit I

2. Describe physiological significance of seed dormancy and various factors involved in its regulation. 15
3. How do abiotic stresses affect plant growth ? Discuss mechanisms adopted to overcome stress. 15

Unit II

4. Write short notes on the following : $7\frac{1}{2} \times 2 = 15$
 - (a) Mechanism of action of Auxins
 - (b) Ethylene and its role in plant growth regulation. 15
5. What are Gibberellins ? Comment on their regulatory role in plant growth and development. 15

B-13652

2

Unit III

6. Write short notes on the following : $7\frac{1}{2} \times 2 = 15$
 - (a) Senescence and its significance
 - (b) Physiological role of abscission phenomenon.
7. What are tropic moments ? Describe Photo and Geotropism and their significance. 15

Unit IV

8. Write short notes on the following : $7\frac{1}{2} \times 2 = 15$
 - (a) Photomorphogenesis
 - (b) Phytochrome action.
9. Discuss Regulation and significance of Photoperiodism on plant development. 15

(5-11/10)B-13652

3

200