

AU-307

**M.Sc. (Part-I) Semester-II (CBCS Scheme) Examination****BOTANY****(Plant Physiology)****Paper-VII**

Time : Three Hours]

[Maximum Marks : 80

**Note :—**(1) All questions are compulsory and carry equal marks.

(2) Draw well labelled diagrams wherever necessary.

1. Write on :

- |                                  |   |
|----------------------------------|---|
| (a) Types of enzymes             | 5 |
| (b) Second Law of Thermodynamics | 5 |
| (c) Redox reactions.             | 6 |

**OR**

- |                                                   |    |
|---------------------------------------------------|----|
| (d) Active sites of isozymes                      | 5  |
| (e) Dissociation and Association constants        | 5  |
| (f) Gibb's free energy.                           | 6  |
| 2. Describe in detail, salinity stress in plants. | 16 |

**OR**

Explain :

- |                                                            |    |
|------------------------------------------------------------|----|
| (a) Phloem loading and unloading                           | 8  |
| (b) Soil-Plant-Atmosphere continuum.                       | 8  |
| 3. Explain in detail $C_4$ pathway of Carbon Assimilation. | 16 |

**OR**

- |                                |   |
|--------------------------------|---|
| (a) Light harvesting complexes | 8 |
| (b) Photomorphogenesis.        | 8 |

4. Explain :

- |                                   |   |
|-----------------------------------|---|
| (g) Glyoxylate pathway            | 5 |
| (h) Glycolysis                    | 5 |
| (i) Physiology of fruit ripening. | 6 |

**OR**

- |                               |   |
|-------------------------------|---|
| (j) Photorespiration          | 5 |
| (k) Pentose phosphate pathway | 5 |
| (l) Programmed cell death.    | 6 |

5. Explain :

- |                            |   |
|----------------------------|---|
| (m) Role of Absciscic acid | 5 |
| (n) Long day plants        | 5 |
| (o) Geotropic movements.   | 6 |

**OR**

- |                              |   |
|------------------------------|---|
| (p) Role of Brassinosteroids | 5 |
| (q) Significance of Florigen | 5 |
| (r) Nyctinastic Movements.   | 6 |