

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

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 :—

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|--|---|
| (a) First law of thermodynamics. | 5 |
| (b) Significance of Michaelis-Menton equation. | 5 |
| (c) Redox reaction. | 6 |

OR

- | | |
|-------------------------------------|---|
| (d) Modulator. | 5 |
| (e) Structure and functions of ATP. | 5 |
| (f) Dissociation constant. | 6 |
2. Explain mechanism for tolerance of water stress. Add a note on osmolyte. 16

OR

What is passive transport ? Explain role of F & P pumps during transport across membrane. 16

3. Give an account of components of electromagnetic spectrum. Calculate energy of one photon at 600 nm. ($h = 6.62 \times 10^{-34}$ Js/photon). 16

OR

Explain photosynthetic carbon reduction cycle. Add a note on its physiological & ecological significance. 16

4. Write on :—

- (g) Complex-I of ETS. 5
(h) Significance of photorespiration. 5
(i) Oxygenase activity of RUBISCO. 6

OR

- (j) Structure of complex-III 5
(k) Significance of PCD. 5
(l) Role of hormones in fruit ripening. 6

5. Write on :—

- (m) Physiological effect of polyamines. 5
(n) Significance of Florigen. 5
(o) Seismonasty. 6

OR

- (p) Nyctinastic movement. 5
(q) Vernalization. 5
(r) Physiological effect of Salicylic acid. 6