

Exam. Code : 103205
Subject Code : 1323

B.A./B.Sc. 5th Semester

BOTANY

Paper : VA (Plant Physiology)

Time Allowed—3 Hours] [Maximum Marks—35

Note :— There are **Eight** questions. Candidates are required to attempt any **five** questions. All questions carry equal marks.

SECTION—A

1. Explain the following :—
 - (i) Importance of water to plant life. 3.5
 - (ii) Diffusion and Osmosis. 3.5
2. Describe briefly :—
 - (i) Cohesion Tension Theory. 3.5
 - (ii) Potassium Pump theory. 3.5

SECTION—B

3. Explain the following :—
 - (i) Donnan Equilibrium of Passive absorption of ions. 3.5
 - (ii) Source-Sink relationship. 3.5

4. Elucidate the following :—

- (i) Difference between Active and Passive absorption. 3.5
- (ii) Factors affecting the translocation. 3.5

SECTION—C

5. Write short notes on the following :—

- (i) Absorption spectra and Enhancement effects. 3.5
 - (ii) Photosynthetic pigments. 3.5
6. Explain the Calvin Cycle in detail with well labelled diagram. 7

SECTION—D

7. Write short notes on the following :—

- (i) Physiological roles of Jasmonic acid. 3.5
 - (ii) Biological clocks. 3.5
8. Explain the physiological roles of the following :—
- (i) Auxin 3.5
 - (ii) Ethylene. 3.5