

Exam. Code : 103205

Subject Code : 1346

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

BOTANY

Paper—V-A (Plant Physiology)

Time Allowed—3 Hours]

[Maximum Marks—35

Note :— Question paper consists of **nine** questions. Attempt **five** questions in all Question No. 1 is compulsory (answer each part in 3-4 lines). All questions carry equal marks (7 marks each).

1. Write short answers to the following :— 7×1=7

- (A) Imbibition.
- (B) Solution Culture.
- (C) Factors affecting translocation.
- (D) Photorespiration
- (E) Differentiate between action and absorption spectra.
- (F) Physiological role of Jasmonates.
- (G) Biological clock.

2. Give a brief account of transpiration in plants and discuss its physiological role. 7

3. Describe in detail, the physiology of stomata. 7

4. What elements are essential in plant nutrition ? Explain the role of any four of them and explain how their deficiency affects the plant growth. 7

5. Describe how the organic substances are translocated in plants. 7

6. Explain the mechanism of CO₂ fixation in C₄ plants. How does it differ from CO₂ fixation in C₃ plants ? 7

7. Explain the two photosystems and their role in photosynthesis. 7

8. Write short notes on :—

(A) Seed dormancy 2

(B) Florigen concept 2

(C) Photomorphogenesis. 3

9. What are phytohormones ? Discuss the role of Gibberellins in plant development. 7