

Exam. Code : 103205

Subject Code : 1346

B.A./B.Sc. 5<sup>th</sup> 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  $\text{CO}_2$  fixation in  $\text{C}_4$  plants. How does it differ from  $\text{CO}_2$  fixation in  $\text{C}_3$  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