

SET A

S. No. of Question paper :
Unique paper Code : 32161502
Name of the course : B.Sc. (Hons) Botany part III
Name of the paper : Plant Physiology (Core- 216)
Semester : V
Duration : 3 Hours+ 1 hour Maximum Marks: 75

Attempt Four questions in all. All questions carry equal marks.

- Q. 1. Explain the role of ATPase pumps in active transport of solutes across plasma membrane. Describe the uniport and cotransport exchange of ions giving the examples.
- Q.2. Discuss the concept of water potential and its components. Explain the mechanism of ascent of sap as per the Cohesion-Tension theory.
- Q.3. What is the composition of phloem exudate ? Describe pressure flow model for assimilate translocation over long distances through phloem along with phloem loading and unloading .
- Q.4. Differentiate between macro- and micro-nutrients of plants. What are their criteria of essentiality? Give physiological roles of nitrogen, phosphorus, and potassium in crop plants and their deficiency symptoms.
- Q.5. Explain the chemical nature, physiological roles and commercial applications of Gibberellins.
- Q.6. Discuss in detail about an essay on role of phytochrome in photomorphogenesis along with its chemical properties and its mode of action.