

**B.Sc. SEM-5 (Hons.) Examination-2020**  
**Subject- Botany (Hons)**  
**Paper – CC-11**  
**Plant Physiology**

**Full Marks –40**

**Time – 2 hrs**

**1. Answer any eight of the following question 8x5**

- a) Describe the mechanism of stomatal opening in light of modern concept of ion movement. 5
  
- b) Distinguish between macro and micro nutrient citing their role in plant metabolism. 5
- c) Enumerate the role of ATPase pump during transport of ions across plant cell membrane. 5
- d) How can you explain source- sink relationship in relation to phloem transport in higher plants? 5
- e) Briefly describe physiological role of ethylene. 5
- f) Explain the term photoperiodism. Classify the plants on the basis of their photoperiodic response. 5
  
- g) Describe the role of ABA and GA in seed dormancy. 5
- h) Point out briefly the mode of action of phytochrome during reproductive growth of higher plants. 5
- i) What is the utility of bioassay technique? Why Jasmonoids and Brassinosteroids are considered as PGR? 5
- j) Write any of the two of the following: - 5
  - i. Role of water potential
  - ii. Cohesion-tension theory in relation to ascent of sap
  - iii. Vernalization
  - iv. Active absorption