

**SET- 'A'**  
**B.Sc. Life Science / Semester III**  
**Unique Paper Code: 42164301**  
**Paper Title: Plant Anatomy and Embryology**

**Time: 3 + 1 Hours**

**Maximum Marks: 75**

(Write your University Roll Number and Paper Title and Unique Paper Code on top of the Answer Sheet)

**Attempt any four questions in all. All questions carry equal marks (i.e., 18.75).**

- Q1. What do you understand by cambial zone? Using well-labeled diagrams describe how it is involved in the growth of a stem.
- Q2. Discuss various anatomical adaptations in hydrophytes and xerophytes with the help of suitable examples and well-labeled diagrams.
- Q3. While labeling the newly prepared slides of *Helianthus* plant parts, the museum curator mixed up the labels. How can he distinguish the slides of root and stem of the plant? Explain using well-labeled diagrams.
- Q4. Discuss the significance of sexual reproduction? With the help of a flowchart, describe the process of sexual reproduction in an angiosperm.
- Q5. What is the significance of cross pollination? Write a brief account of the various strategies adopted by angiosperms to transfer pollen from anther of one flower to stigma of another flower.
- Q6. What is double fertilization? Describe the development of the two products of double fertilization during the formation of a dicotyledonous seed. Support your answer with well-labeled diagrams.