

**2021**

**BOTANY — HONOURS**

**Paper : CC-3**

**(Plant Anatomy)**

**Full Marks : 50**

*The figures in the margin indicate full marks.*

*Candidates are required to give their answers in their own words  
as far as practicable.*

1. Answer **any five** questions from the following: 2×5
    - (a) What is Plastochrone?
    - (b) Distinguish between Apoplast and Symplast.
    - (c) Define leaf trace and leaf-gap.
    - (d) State two adaptive anatomical features of xerophyte.
    - (e) Define Stele.
    - (f) State the function of lenticel.
    - (g) What is phelloderm?
    - (h) Distinguish between dorsiventral and iso-bilateral leaves.
  
  2. Answer **any two** questions of the following: 5×2
    - (a) Briefly describe the organisation of shoot apices.
    - (b) Comment on the adaptive anatomical features of hydrophytes.
    - (c) Write down the ultrastructure of plasmodesmata.
    - (d) Describe the types of stomata according to Stebbins and Khush (1961).
  
  3. Answer **any three** questions of the following:
    - (a) Describe the extrastelar secondary growth in dicots with suitable illustration. Distinguish between fascicular and interfascicular cambium. 7+3
    - (b) Describe ultrastructure and chemical constituents of cell wall. 7+3
    - (c) Comment on the anomalous secondary structure of *Dracaena* with suitable diagram. What is intraxylary phloem? Give an example. 7+3
    - (d) Write a note on mechanical tissues and the principle governing their distribution. 6+4
    - (e) Describe application of plant anatomy in systematics and pharmacognostic study. 5+5
-