

2022

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 :

2×5

- (a) What is elementary fibril? Mention its function.
- (b) Define Tunica and Corpus.
- (c) Distinguish between early wood and late wood.
- (d) Write a brief note on Tylosis.
- (e) What do you mean by bicollateral open vascular bundle? Elucidate your answer with a neat schematic diagram.
- (f) Mention any two applications of plant anatomy in forensic science.
- (g) Distinguish between alburnum and duramen.
- (h) Define interxylary periderm. Where does it found?

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LIBRARY2. Answer *any two* questions :

- (a) With suitable diagram explain the secondary growth of *Tinospora* root. 5
- (b) Write a note on 'Korper-Kappe' theory with suitable illustrations. 5
- (c) Comment on the adaptive anatomical features of xerophytes. 5
- (d) Write a brief note on tension wood. Define secondary growth. Mention the plant group other than angiosperms where it takes place. 3+1+1

3. Answer *any three* questions :

- (a) Briefly describe the modifications and the chemical changes of the cell wall occurs during its growth. 5+5
- (b) Define stele and vascular bundle. Schematically represent different types of stele. Discuss different theories with respect to stelar evolution. 2+3+5
- (c) With suitable diagrams describe the different types of stomata. 10
- (d) What do you understand by anomalous plant secondary growth? Mention its significances. Classify different anomalous growth with suitable example. 2+3+5
- (e) Distinguish between Procambium, Vascular Cambium and Cork Cambium. Mention two adaptive features of *Nelumbonucifera*. Define a ring porous wood with suitable diagram. Give one example. 6+2+2