

# CITY COLLEGE EXAMINATION CENTRE

**B.Sc. (Hons.) Semester - II Examination, 2020**  
[According to Calcutta University Botany Hons. (CBCS) syllabus]

**Subject: BOTANY**  
**Paper – CC3 [Plant Anatomy]**

**Time: 4 hours**

Please submit your answer script as a *single pdf file* to the following e-mail ID:  
**botanycity.s2hons@gmail.com**

## Group – A (Internal Assessment)

**Full Marks: 10**      *Answer any two of the following questions*      **2 x 5 = 10**

1. What is actinostele? Draw a diagrammatic figure and give an example. (2+2+1)
2. Write a short note on phellogen. (5)
3. What is Anisocytic stomata? Draw the stomatal complex and give an example. (2+2+1)
4. Differentiate between protoxylem and metaxylem. (5)

## Group – B (Theory)

**Full Marks: 25**

1. *Answer any two of the following questions*      **2 x 10 = 20**
  - i) Describe secondary growth in *Tecoma* stem with a suitable figure (10)
  - ii) Write down the Korper-Kappe theory of root apex (10)
  - iii) What are the functions of stomata? Elucidate different stomatal types of monocots according to Stebbins and Khush. (2+8)
  - iv) Briefly describe the chemical constituents of cell wall. (10)
2. *Answer any one of the following questions*      **1 x 5 = 5**
  - i) Mention three adaptive anatomical features of Xerophytes (5)
  - ii) Mention three adaptive anatomical features of Hydrophytes (5)
  - iii) Give a brief account of application of plant anatomy in forensic science. (5)

## Group – C (Practical)

**Full Marks: 15**      *Answer any three of the following questions*      **3 x 5 = 15**

1. Write down three anatomical differences between monocot and dicot stem. (5)
2. Represent diagrammatically and label a paracytic and a diacytic stoma. (5)
3. Write down three anatomical differences between monocot and dicot root. (5)
4. Briefly describe the anomalous secondary structures of *Tinospora* root. (5)
5. Write down the characteristic features of aleurone grains and laticiferous ducts. (2.5+2.5)
6. Briefly describe the anomalous secondary structures of *Bignonia* stem. (5)