



বিদ্যাসাগর বিশ্ববিদ্যালয়
VIDYASAGAR UNIVERSITY
Question Paper

B.Sc. Honours Examinations 2021

(Under CBCS Pattern)

Semester - III

Subject : BOTANY

Paper : C 5 - T & P

(Anatomy of Angiosperms)

Full Marks : 60 (Theory-40 + Practical-20)

Time : 3 Hours

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

The figures in the margin indicate full marks.

(Theory : Marks - 40)

Group-A

A. Answer any **three** of the following questions :

12×3=36

1. What is cambium ring? How is it formed? Draw and describe the secondary growth in dicot stem. What are alburnum and duramen? 2+2+5+3
2. Give an account of root stem transition in angiosperm with proper diagram. Write the anatomical features of hydrophytes. 8+4
3. Draw and describe the different types of stomata in angiosperm with proper example. What are adcrustation and incrustation? 8+4

4. What is extra-stelar secondary growth? Describe it with their components and diagrams. Describe the anomalous secondary growth in *Dracaena* with proper diagram. 2+6+4
5. Illustrate the shoot apex organization with special reference to Histogen theory. Differentiate between spring wood and autumn wood. Illustrate the origin of lateral root. 6+3+3
6. What are laticiferous tissues? Mention their types. Differentiate between the anatomical features of dorsiventral and isobilateral leaves. Write a note on hydathode. 2+2+4+4

Group-B

B. Answer any **two** of the following questions : 2×2=4

1. What are tyloses?
2. What is casparian strip? State its function.
3. What is meant by Kranz anatomy.
4. What is bulliform cell? Where does it occur?

(Practical)

Paper - C 5 P

(Anatomy of Angiosperms)

Marks : 20

Group-A

A. Answer any **one** of the following questions : 15×1=15

1. (a) Describe the features and distribution of parenchyma, collenchyma and sclerenchyma.
- (b) Give examples with diagrams only of cavities and lithocysts. 9+6
2. (a) Draw with labelled diagrams of—
 - (i) T.S. of stem of *Aristolochia*

(ii) Glandular and non-glandular trichomes.

(iii) Laticifers

5+5+5

3. Give the features of :

(a) Lenticels and bulliform cells

(b) Ringporous and diffuse porous woods

(c) Adaptive anatomy of xerophytes

5+5+5

Group-B

B. Answer any *one* of the following questions :

5×1=5

1. Discuss the different thickenings of xylem elements

2. Write an essay on vascular cambiums

3. Classify different types of dicotyledonous stomata with examples
