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3 SEM TDC BOTH (CBCS) C 5

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(Nov/Dec)

BOTANY

(Core)

Paper : C-5

(Anatomy of Angiosperms)

Full Marks : 53

Pass Marks : 21

Time : 3 hours

*The figures in the margin indicate full marks
for the questions*

1. Fill in the blanks of the following : $1 \times 3 = 3$

(a) Companion cells are always associated with the _____.

(b) Velamen tissue is found in the roots of _____.

(c) Elongated tube-like dead cells with tapering end are known as _____.

(2)

2. Choose the correct answer from the following : $1 \times 2 = 2$
- (a) Histogen theory was proposed by Hanstein / Schmidt / Robert Hooke / Esau.
- (b) In a dicot stem, cork cambium originates from epidermis / pericycle / cortex / vascular bundles.
3. Explain any *four* of the following : $3 \times 4 = 12$
- (a) Importance of plant anatomy in systematics
- (b) Pits and plasmodesmata
- (c) Hydathodes
- (d) Tunica-Corpus theory
- (e) Bicollateral vascular bundles
- (f) Epicuticular waxes
4. Differentiate between any *three* of the following : $4 \times 3 = 12$
- (a) Shoot apex and Root apex
- (b) Fibrous and Sclereids
- (c) Open vascular bundle and Closed vascular bundle
- (d) Heartwood and Sapwood

(3)

5. What is stomatal apparatus? Explain the structure and functions of cells of stomatal apparatus. Give labelled diagrams. $2+8+2=12$

Or

With suitable diagrams, discuss the anatomical structure of dicot stem. $4+8=12$

6. With suitable sketches, discuss the anatomical adaptations of hydrophytes. $4+8=12$

Or

Write explanatory notes on any *two* of the following : $6 \times 2 = 12$

- (a) Adcrustation and Incrustation
- (b) Lenticels
- (c) Glandular and Non-glandular trichomes
