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3 SEM TDC BOTH (CBCS) C 5

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(Held in January/February, 2022)

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) Lateral roots are _____ in origin.
 - (b) The hard corky layer of coconut is an example of _____ tissue.
 - (c) The tunica-carpus theory was put forwarded by _____.

(2)

2. Choose the correct answer from the following : $1 \times 2 = 2$

(a) The inactive and passive cell in root apex is known as tunica-carpus/quiescent centre/calyptragen.

(b) Primary/Secondary/Lateral/Intercalary meristem helps in increasing girth of plants.

3. Explain any four of the following : $3 \times 4 = 12$

(a) Importance of plant anatomy in systematics

(b) Ergastic substances

(c) Plasmodesmata and pits

(d) Hydathodes

(e) Quiescent centre

(f) Casparian strip

4. Differentiate between any three of the following : $4 \times 3 = 12$

(a) Root apex and Shoot apex

(b) Lithocysts and Laticifers

(c) Heartwood and Sapwood

(d) Monocot and Dicot stem anatomy

(e) Meristematic tissue and Permanent tissue

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(Continued)

(3)

5. What is conducting tissue? Discuss the components and their functions of conducting tissues. $2 + 10 = 12$

Or

What are the characteristic features of xerophyte? Describe different types of anatomical adaptation of xerophytes giving their salient features. $4 + 8 = 12$

6. What is cambium? Discuss the role of cambium in secondary growth in plants. $2 + 10 = 12$

Or

Write explanatory notes on the following : $6 \times 2 = 12$

(a) Kranz anatomy

(b) Types and function of stomata in dicot plant

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