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( Held in April–May, 2021 )

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.** Choose the correct answer of the following : 1×5=5
- (a) The tunica-carpus theory was put forth by Foster/Schmidt/Strasburger/Nägeli.
- (b) The vascular bundles in monocot stems are open/closed/radial/amphicribral.
- (c) Active divisions occur in the cells of xylem/phloem/cambium/collenchyma.

- (d) In old corky stem, gaseous exchange between air and internal tissues takes place through stomata/sieve/lenticels/tracheids.
- (e) Interfascicular cambium is situated outside the vascular bundles/in pith/in between vascular bundles/inside the vascular bundles.

- 2.** Explain any *four* of the following : 3×4=12

- (a) Ergastic substances
- (b) Plasmodesmata
- (c) Complex tissue
- (d) Quiescent centre
- (e) Pericycle

- 3.** Differentiate between any *three* of the following : 4×3=12

- (a) Sapwood and Heartwood
- (b) Primary meristem and Secondary meristem
- (c) Collenchyma and Schlerenchyma tissues
- (d) Cork cambium and Vascular cambium
- (e) Dicot and Monocot stem

( 3 )

4. What are permanent tissues? Describe the different types of simple permanent tissues.

2+10=12

*Or*

With suitable sketches, describe the process of secondary growth in dicotyledonous stem.

3+9=12

5. With suitable sketches, mention the distinguishing characters of different types of vascular bundles found in angiosperms.

6+6=12

*Or*

Describe about the anatomical adaptations of xerophytes and hydrophytes.

6+6=12

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