

**63/1 (SEM-3) CC5/BOTHC3056**

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( Held in 2023 )

**BOTANY**

Paper : BOTHC3056

( Anatomy of Angiosperms )

Full Marks : 60

Pass Marks : 24

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) Vascular bundles in *Cucurbita* stem  
are

(i) closed, conjoint, endarch

(ii) open, conjoint, endarch

(iii) closed, conjoint, exarch

(iv) open, conjoint, exarch

( Turn Over )

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- (b) Nectaries of a flower are
- sieve cells
  - internal secretory glands
  - external secretory glands
  - glandular hairs
- (c) The pith of plant is developed from the
- cambium
  - plerome
  - quiescent centre
  - periblem
- (d) 'Air cavity' of *Eichhornia* is a modification of
- collenchyma tissue
  - sclerenchyma tissue
  - companion cells
  - parenchyma tissue
- (e) The fragrance of flowers is due to the presence of
- osmophor glands
  - nectar glands
  - hydathodes
  - laticiferous glands

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( Continued )

( 3 )

Answer the following questions in short :  
2×5=10

- Mention two functions of stomata.
- State the importance of sclerenchyma tissue.
- What is plasmodesmata?
- What is Kranz anatomy?
- Define sap wood and heart wood.

3. Write notes on the following (any five) : 5×5=25

- Role of anatomy in pharmacognosy
- Difference between collateral and radial vascular bundle
- Epidermal tissue system
- Origin of cambium and its functions
- Types of stomata among dicotyledonous plants
- Korper-Kappe theory
- Secretory glands of plants

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( Turn Over )

( 4 )

4. Answer any *two* of the following questions :

10×2=20

- (a) Briefly discuss the theories of structural development and differentiation of shoot apex in flowering plants. 10
- (b) Give a concise note on anatomical adaptation of free floating and submerged aquatic plants. 5+5=10
- (c) What is secondary growth? Discuss briefly how secondary growth takes place in dicot woody plants. 2+8=10

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