

B.Sc. (CBCS Pattern) Semester-II  
**012A - Botany Paper-I - Morphology and Anatomy of Angiosperms**

P. Pages : 2

Time : Three Hours



**GUG/W/24/11572**

Max. Marks : 50

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- Notes :
1. All questions are compulsory.
  2. All questions carry equal marks.
  3. Draw well labeled diagrams wherever necessary.

**1.** Write on:

- |  |          |
|--|----------|
| a) Modification of Adventitious roots. | <b>5</b> |
| b) Types of leaf.                      | <b>5</b> |

**OR**

Write short notes on:

- |                         |           |
|-------------------------|-----------|
| c) Pneumatophores       | <b>2½</b> |
| d) Tuber & bulb         | <b>2½</b> |
| e) Phyllotaxy           | <b>2½</b> |
| f) Erect and weak forms | <b>2½</b> |

**2.** Write on:

- |  |          |
|--|----------|
| a) Define inflorescence and its types (Racemose) | <b>5</b> |
| b) Types of Aestivation.                         | <b>5</b> |

**OR**

Write short notes on:

- |                            |           |
|----------------------------|-----------|
| c) Cyathium inflorescence. | <b>2½</b> |
| d) Aggregate fruit.        | <b>2½</b> |
| e) Adhesion of stamens.    | <b>2½</b> |
| f) Types of Placentation.  | <b>2½</b> |

**3.** Write on:

- |                               |          |
|-------------------------------|----------|
| a) Types of Vascular Bundles. | <b>5</b> |
| b) Tunica-Corpus theory.      | <b>5</b> |

**OR**

Write short notes on:

- c) Hydathode 2½
- d) Structure of cambium 2½
- e) Simple tissue 2½
- f) Laticiferous ducts 2½

4. Write on:

- a) What is secondary growth? Explain secondary growth in *Draceana* stem. 5
- b) Anomalous secondary growth in *Borhaavia* stem. 5

**OR**

Write short notes on:

- c) Structure of monocot root (Diagram only) 2½
- d) Primary structure in dicot stem (Diagram only) 2½
- e) Secondary growth in *Moringa* stem. 2½
- f) T.S. of Dicot Leaf (Diagram only) 2½

5. Write on the following in two or three lines only **any ten** (Diagram not necessary) 10

- a) Reticulate venation
- b) Napiform root
- c) Phyloclade
- d) Spike
- e) Hypogynae
- f) Berry
- g) Digestive gland
- h) Bicollateral Bundle
- i) Trichomes
- j) Lysigenous cavity
- k) Spongy parenchyma
- l) Bulliform cells.

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