

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

P. Pages : 2

Time : Three Hours



GUG/S/23/11572

Max. Marks : 50

- Notes : 1. All questions are compulsory and carry equal marks.
2. Draw well labeled diagram where ever necessary.

1. a) Describe modification of tap root. 5
b) Describe modifications of leaf. 5

OR

- c) Breathing roots. 2½
d) Underground stem modification. 2½
e) Phyllotaxy. 2½
f) Types of angiosperms on the basis of habit. 2½
2. a) Define placentation and write it's types. 5
b) Explain the types of Aestivation. 5

OR

- c) Verticillaster. 2½
d) Types of gynoecium. 2½
e) Adhesion of stamens. 2½
f) Types of composite fruits. 2½
3. a) Explain types and functions of sclerenchyma. 5
b) Describe theory of root apical meristem. 5

OR

- c) Characters of ground tissue system. 2½
d) Structure of cambium. 2½
e) Conjoint bundles. 2½
f) Secretary tissues. 2½

4. a) What is secondary growth? Explain secondary growth in Moringa stem. 5
- b) Define anomalous secondary growth. Describe anomalous secondary growth in a monocot stem Dracaena. 5

OR

- c) Primary structure in young dicot root. 2½
- d) Primary structure in monocot stem (diagram only) 2½
- e) Abnormal secondary growth in Boerhaavia. 2½
- f) T. S. of dicot leaf (diagram only) 2½
5. Write **any ten** questions in one or two lines only (diagrams are not necessary) 1x10
=10
- a) Stilt root
- b) Root butteress
- c) Decompound leaf
- d) Gall flowers
- e) Pappus
- f) Caryopsis
- g) Hydathode
- h) Phellogen
- i) Trichomes
- j) Casparian strips
- k) Amphivassal vascular bundle
- l) Bulliform cells
