

**Bachelor of Science (B.Sc.) Semester-IV Examination****BOTANY****(Angiosperm Anatomy & Embryology)****Paper—I**

Time—Three Hours]

[Maximum Marks—50

Note :- (1) All questions are compulsory and carry equal marks.

(2) Draw well labelled diagrams wherever necessary.

1. Write on :

(a) Structure and functions of phloem. 5

(b) Types of meristem based on position. 5

OR

Write short notes on :

(c) Sclerenchyma. 2.5

(d) Xylem vessel. 2.5

(e) Parenchyma. 2.5

(f) Modular growth in shoot. 2.5



2. Write on :

- (a) Primary structure of sunflower stem. 5
- (b) Newman's theory of root apical meristem. 5

OR

Write short notes on :

- (c) Apical cell theory. 2.5
- (d) T.S. of *Maize* stem. (Diagram only) 2.5
- (e) Concentric vascular bundles. 2.5
- (f) Cambium structure. 2.5

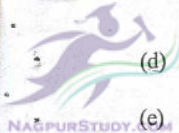
3. Write on :

- (a) Sapwood and Heartwood. 5
- (b) Secondary growth in *Bignonia* stem. 5

OR

Write short notes on :

- (c) Structure of periderm 2.5

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- (d) T.S. of *Nerium* leaf (diagram only) 2.5
- (e) T.S. *Dracaena* stem 2.5
- (f) Abscission 2.5

4. Write on :

- (a) Double fertilization and triple fusion 5
- (b) Polygonum type of embryo sac 5

OR

Write short notes on :

- (c) Dicot embryo 2.5
- (d) Anatropous ovule 2.5
- (e) Cellular endosperm 2.5
- (f) T. S. anther (diagram only) 2.5

5. Write in **TWO** to **THREE** lines only (any **TEN**) Diagrams are not necessary :

- (a) Secondary meristem
- (b) Secretory tissue



(c) Collenchyma

(d) Tunica

(e) Exarch xylem

(f) Collateral Vascular Bundle

(g) Growth rings

(h) Senescence

(i) Motor cells

(j) Cross pollination

(k) Helobial endosperm

(l) Exine.

1×10