

KNT/KW/16/5144

**Bachelor of Science (B.Sc.) Semester—IV (C.B.S.) Examination**

**BOTANY (Angiosperm Anatomy and Embryology)**

**Paper—I**

Time : Three Hours]

[Maximum Marks : 50

**N.B. :—** (1) **ALL** questions are compulsory and carry equal marks.

(2) Illustrate your answers with suitable examples and diagrams wherever necessary.

1. Write on :

(a) Modular type of growth.

(b) Structure and functions of secondary phloem.

5×2

**OR**

Write short notes on :

(c) Collenchyma

(d) Laticiferous tissue

(e) Xylem Vessels

(f) Sclerenchyma.

2.5×4

2. Write on :

(a) Structure and functions of cambium

(b) Primary structure of Sunflower stem.

5×2

**OR**

Write short notes on :

(c) Conjoint Vascular bundles

(d) Tunica-carpus theory

(e) T.S. Maize root (Diagram only)

(f) Apical cell theory.

2.5×4

3. Write on :

(a) Anomalous secondary growth in *Bignonia*

(b) V. S. *Nerium* leaf.

5×2

**OR**

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(Contd.)

Write short notes on :

- (c) Growth rings
- (d) T.S. *Dracaena* stem (Diagram only)
- (e) Periderm
- (f) Senescence.

2.5×4

4. Write on :

- (a) Types of Ovules
- (b) Adaptations for pollination.

5×2

**OR**

Write short notes on :

- (c) T.S. anther (Diagram only)
- (d) Significance of pollination
- (e) Ultrastructure of pollen grain
- (f) Double fertilization.

2.5×4

5. Write in **two** or **three** lines on each (Any **TEN**). Diagrams are not necessary :

- (a) Tyloses
- (b) Tracheids
- (c) Glandular tissue
- (d) Radial vascular bundles
- (e) Ground tissue
- (f) Casparian strips
- (g) Heart wood
- (h) Abscission
- (i) Bulliform cells
- (j) Tapetum
- (k) Helobial endosperm
- (l) Egg apparatus.

1×10