(iii) V.S. Shoot apical meristem

(iv) T.S *Hydrilla* stem

5. (a) What do you understand by the seasonal activity of cambium? Explain with the help of a well-labelled diagrams.   (8)

    (b) Explain with examples various types of vascular bundles in plants.   (7)

6. (a) Describe epidermal tissue system with special reference to various types trichomes in plants.   (8)

    (b) Phloem wedges are formed as a result of anomalous secondary growth. Discuss the statement with the help of well labelled diagram.   (7)

7. (a) Along with suitable examples, describe the anatomical adaptations shown by xerophytes.   (8)

    (b) Describe the structure and function of tracheary elements with the help of suitable diagrams.   (7)

[This question paper contains 4 printed pages.]

Your Roll No...............

Sr. No. of Question Paper : 4341   G

Unique Paper Code   : 32161301

Name of the Paper   : Anatomy of Angiosperms

Name of the Course   : **B.Sc. (Hons.) Botany**

Semester   : III

Duration : 3 Hours   Maximum Marks : 75

Instructions for Candidates

1. Write your Roll No. on the top immediately on receipt of this question paper.

2. Question No. **1** is compulsory and attempt **five** questions in all.

3. Draw well-labelled diagrams wherever required and answer all parts of question.

1. (a) Define the following **(Any five)** :   (5×1=5)

    (i) Adcrustation

    (ii) Dermatogen

    (iii) Aleurone grains

P.T.O.

(iv) Reaction wood

(v) Styloids

(vi) Errera's rule

(b) Match the following :   (5×1=5)

1) Salt gland   a) Intrafascicular cambium

2) Carnuaba wax   b) *Atriplex*

3) Included phloem   c) Cucurbitaceae

4) Bicollateral vascular   d) *Salvadora persica*
bundles

5) Procambium   e) *Copernicia nucifera*

(c) Fill in the blanks :   (5×1=5)

(i) Vascular bundles localized in the pith region are called _____ .

(ii) Epidermal cell giving rise to root hair is known as _____ .

(iii) Inulin is an example of _____ .

(iv) _____ is an unbranched $\beta-1, 3$-glucan.

(v) Time interval between successive leaf primordia is called _____ .

2. Write short notes on : **(Any three)**   (3×5=15)

(i) Applications of Plant Anatomy in Pharmacognosy

(ii) Parenchyma

(iii) Hydathodes

(iv) Periderm

3. Differentiate between : **(Any five)**   (5×3=15)

(i) Storied and non-storied cambium

(ii) Simple and bordered pits

(iii) Dicot and monocot root

(iv) Tunica Corpus and Körper-Kappe theory

(v) Ring porous and diffuse porous wood

(vi) Sclereids and fibres

4. Draw well labelled diagrams of **(Any three)** :

                               (3×5=15)

(i) V.S. *Zea mays* leaf

(ii) T.S of *Ficus* leaf showing lithocyst