

3/12/19 M

[This question paper contains 4 printed pages.]

Your Roll No.....

Sr. No. of Question Paper : 7383

J

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 together.

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

(i) Passage cell

(ii) Plastochrone

(iii) Tension wood

P.T.O.

7383

2

(iv) Angular collenchyma

(v) Ray tracheid

(vi) Lysigenous cavity

(b) Match the following:

(5×1=5)

(i) Vesselless angiosperms (a) Ficus

(ii) Casparian strip (b) Root hair

(iii) Bulliform cells (c) Trochodendron

(iv) Trichoblast (d) Endodermis

(v) Cystolith (e) Grasses

(c) Give suitable examples where following are present
(any five) (5×1=5)

(i) Brachysclereids

(ii) Amphicribal vascular bundle

(iii) Lacunar collenchyma

(iv) Velamen

(v) Glandular trichome

(vi) Articulated laticifer

7383

3

2. Write short notes on **any three** of the following:

(3×5=15)

(a) KorperKappe theory

(b) Application of plant anatomy in systematics

(c) Origin of lateral roots

(d) Lenticels

(e) Hydathodes

3. Differentiate between (**any five**)

(5×3= 5)

(a) Storied and Non storied cambium

(b) Ray and fusiform initials

(c) Heart and sap wood

(d) Vessel and tracheid

(e) Simple and bordered pits

(f) Collenchyma and sclerenchyma

(g) Ring porous and diffuse porous wood

4. (a) Elaborate the process of secondary growth in
dicot stem. (10)

(b) Define quiescent centre and its significance. (5)

P.T.O.

5. Draw well labelled diagrams (any three) (5×3=15)
- (a) T.S. Dicot root
 - (b) V.S. shoot apex
 - (c) Kranz anatomy
 - (d) T.S. wood showing tyloses
 - (e) Periderm
6. (a) Elucidate the anatomical adaptations in xerophytes. (10)
- (b) Explain seasonal activity of cambium (5)
7. (a) Discuss various types of stomata present in angiosperms with suitable examples. (10)
- (b) Elaborate cytodifferentiation of sieve tube elements. (5)