

Roll No.

Total No. of Questions : 9]
(2042)

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UG (CBCS) IInd Year Annual Examination

2094

B.Sc. BOTANY

(Plant Anatomy and Embryology)

(DSC-IA)

Paper : III BOTA 201

Time : 3 Hours]

[Maximum Marks : 50

Note :- Attempt *five* questions in all, selecting *one* question from each Section-B, C, D and E. Question No. 1 of Section-A is compulsory. Attempt all subparts of a question together.

Section-A

(Compulsory Question)

1. Attempt all the subparts.

(i) What is Cleistogamy ?

(ii) The xylem vessels are the living component of the xylem. (True or False)

CH-813

(1)

Turn Over

- (iii) Apical cell theory was proposed by.....
- (iv) Bast fibres originate from :
- (a) Surface of seed (b) Cortex
(c) Epidermis (d) Pericycle
- (v) What is Chiropterophily ?
- (vi) Cork, cork cambium and secondary cortex are together known as
- (vii) Endosperm in angiosperm is in nature.
- (viii) Bulliform cells are present in
- (ix) Why the wood of gymnosperms is known as non-porous wood ?
- (x) Ubisch bodies are found in $1 \times 10 = 10$

Section-B

2. (a) What are Meristem ? Classify the meristem based upon their position, origin and functions.
- (b) Differentiate root and stem anatomically. $5+5=10$
3. (a) What is root apical meristem ? Explain different theories regarding root apical meristem.
- (b) What is complex permanent tissues ? Explain any *one* complex permanent tissue in detail. $5+5=10$

Section-C

4. (a) Describe the secondary growth in dicot root with suitable diagram.
- (b) Differentiate porous wood with non-porous wood. $6+4=10$
5. (a) What is Periderm ? Explain different components of periderm. Differentiate periderm with bark.
- (b) Explain the anomalous secondary growth in *Boerhaavia*. $6+4=10$

Section-D

6. (a) Explain different types of ovules of angiosperms based upon shape and orientation.
- (b) What is Anemophily ? Write down the characters of anemophilous flowers. $6+4=10$
7. (a) Explain different types of embryo sacs.
- (b) Draw the well labelled diagram of transverse section of anthers. $6+4=10$

Section-E

8. (a) What are the post-fertilization changes in ovule ?
- (b) Explain hydrochory and zoochory with examples. $6+4=10$

9. (a) Write a note on embryo-endosperm relationship.
Differentiate dicot embryo with monocot embryo.
- (b) What is Seed Dormancy ? What are the factors responsible for seed dormancy ? $5+5=10$