



24. Write the ecological adaptations in mangroves.
25. Classify the different types of sclerenchyma present in the plant body. State their functions.
26. Describe the different theories related to the organization of root apex. (6×2=12)

SECTION – E

Answer **any one** :

Essay type questions. **Each** question carries a weightage of **4**.

27. Describe the anomalous secondary growth in Bignonia with a neat and labeled diagram.
28. Explain the different types of non-living inclusions of a cell.
29. Describe the structure and development of megasporangium in angiosperms. (1×4=4)



Reg. No. :

Name :

V Semester B.Sc. Degree (CCSS - Reg./Supple./Imp.) Examination,
November 2015
(2012 Admn. Onwards)
CORE COURSE IN BOTANY/PLANT SCIENCE
5B07 BOT/PLS : Angiosperm Anatomy and Reproductive Botany

Time : 3 Hours

Total Weightage : 30

Instruction : Draw diagrams *wherever necessary*.

SECTION – A

Answer **all** questions in bunches of **four**. **Each** bunch carries a weightage of **1**.

1. Choose the correct answer :

- i) Centripetally developed xylem elements gives rise to
a) Mesarch bundle b) Endarch bundle
c) Exarch bundle d) Bicolateral bundles
- ii) The common type ovule seen in angiosperms
a) Orthotropous b) Anatropous
c) Circinotropous d) Campylotropous
- iii) Water secreting glands in plants are
a) Trichomes b) Hydathodes
c) Digestive glands d) Nectaries
- iv) Cotyledons seen in monocot seed is called
a) Scutellum b) Labellum
c) Vexillum d) Phellum

2. State **true** or **false** :

- i) Megasporophylls are regarded as male organs of the flower.
- ii) Cystoliths are developing in certain specialized cells called lithocysts.
- iii) Tyloses are balloon like structures seen in the lumen of xylem vessels.
- iv) Cell wall is the non-living component of a plant cell and is secreted by the living protoplasm.



3. Fill in the blanks :

- i) The innermost wall layer of anther is called _____
- ii) A pit developed without having any corresponding pit on the adjacent wall is called _____
- iii) The living cell seen in association with xylem is _____
- iv) The exine of pollen grain is made up of _____

4. Match the following :

	A	B	C
i)	Hydathode	Pinus needle	Colocasia
ii)	Raphides	Calcium Carbonate	Lateral conduction
iii)	Transfusion tissue	Epithem	Ficus leaf
iv)	Cystoliths	Calcium oxalate	Secretory tissue

(4×1=4)

SECTION – B

Answer **any five**. Each question carries a weightage of 1.

Differentiate the following :

5. Ring porous wood and diffuse porous wood.
6. Anomocytic stomata and anisocytic stomata.
7. Porogamy and mesogamy.
8. Apotracheal parenchyma and paratracheal parenchyma.
9. Cork and bark.
10. Leptocentric vascular bundles and hadrocentric vascular bundles. (5×1=5)



SECTION – C

Answer **any five** :

Short answer questions. **Each** question carries a weightage of 1.

11. Dendrochronology.
12. Explain the NPC system.
13. What is abscission ?
14. Explain the classification of meristem based on the plane of cell division.
15. Comment on primary cell wall.
16. What is a ruminant endosperm ?
17. Explain the function of tapetum. (5×1=5)

SECTION – D

Answer **any six** :

Short answer questions. **Each** question carries a weightage of 2.

18. Describe the different types of ovule.
19. Explain the anatomical features of a typical bifacial leaf with a neat and labeled diagram.
20. What is tapetum ? Explain the different types of tapetum.
21. Explain the formation of male gametes in angiosperms.
22. Describe the latex cells and latex vessels.
23. Explain periderm formation in a dicot root.