

**Avinashilingam Institute for Home Science and Higher Education for
Women, Coimbatore-641043
Bachelor's Degree Examination – November 2017
III Semester**

**Class : II UG
Major : Botany**

**Time : 3Hours
Max.Marks : 100**

**15BBOC07 Anatomy and Embryology
Part – A**

10x1=10

Choose the correct answer

1. The term meristem was given by -----
a. C. Nageli
b. N. Grew
c. Hanstein
d. Hooke
2. The living cell without nucleus
a. Companion
b. Vessels
c. Tracheid cells
d. Sieve tube cell
3. Xylem is rich in -----
a. Starch
b. Lignin
c. Lipid
d. Protein
4. The vascular bundles consists of -----
a. Primary phloem
b. Primary xylem
c. Cambium
d. All the above
5. Sieve cells and companion cells are found in -----
a. Xylem
b. Phloem
c. Parenchyma
d. Collenchyma
6. Periderm is formed by the activity of a secondary lateral meristem called -----
a. Cuticle
b. Phellogen
c. Lenticels
d. Phelloderm
7. Pollinia is found in -----
a. Asclepiadaceae
b. Liliaceae
c. Poaceae
d. Amaranthaceae
8. Tapetum is a -----
a. Protective tissue
b. Nutritive tissue
c. Mechanical tissue
d. Meristematic tissue
9. In Gymnosperms, the nature of the endosperm is -----
a. Haploid
b. Diploid
c. Triploid
d. Tetraploid
10. The endosperm with irregular ridges and furrows is -----
a. Ruminant
b. Cellular
c. Helobial
d. Nuclear

Part – B

5x6=30

Answer the following

Answer should not exceed 400 words or two pages

11. a. Write short notes on the classification of meristems.
(or)
11. b. Briefly describe the structure and functions of parenchyma.
12. a. Give an account on the anatomical features of dicot stem.
(or)
12. b. Briefly elaborate the internal structure of monocot root with neat diagram.

13. a. Give a comparative account on tracheids and vessels.
(or)
13. b. Briefly explain about –Secondary structure of root with neat diagram .
14. a. Give a brief note on different types of ovules.
(or)
14. b. Write short notes on the functions of tapetum.
15. a. Write short notes on crucifer type of embryogenesis.
(or)
15. b. Write short notes on suspensor.

Part – C

5x12=60

Answer the following

Answer should not exceed 800 words or 4 pages

16. a. Give a detailed account on the theories of shoot apex organization.
(or)
16. b. Write an essay on the elements of xylem and phloem.
17. a. Briefly outline the anatomical features of a dicot root with suitable examples.
(or)
17. b. Explain the structure of dicot leaf with neat diagram.
18. a. Describe the process of secondary growth takes place in stem?
(or)
18. b. Write an essay on anomalous secondary growth in *Dracaena*.
19. a. Briefly describe the types of embryosac.
(or)
19. b. Describe the process of fertilization in angiosperms.
20. a. Write an essay on embrogeny in monocotyledons.
(or)
20. b. Define endosperm? Describe its morphological and functional features.