

**Avinashilingam Institute for Home Science and Higher Education for Women
[Deemed to be University] Coimbatore-641 043**

**Bachelor's Degree Examination – November 2018
III Semester**

**Class : II UG
Major : Botany**

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

15BBOC07 Anatomy and Embryology

**Part-A
Choose the correct answer**

10 x 1=10

1. The meristematic tissue dividing in all planes is referred as
a. Promeristem b. Urmeristem c. Massmeristem d. Primary cambium
2. The thickening of collenchyma is due to the deposition of
a. Lignin b. Pectin c. Cutin d. Suberin
3. The vascular bundles in the stem of monocots are typically
a. Radial b. Concentric c. Bicollateral d. Collateral
4. In a leaf proto xylem is situated on the
a. Adaxial side b. Abaxial side c. Lateral side d. Central side
5. Secondary cortex cells produced by cork cambium are called
a. Phelloderm b. Phellem c. Periderm d. Phellogen
6. Growth rings are formed due to activity of
a. Extra stelar cambium b. Inter stelar cambium c. Intra stelar cambium d. both b and c
7. The nucleus of tapetal cell divides by
a. Mitosis and amitosis b. Amitosis and Endo mitosis
c. Endomitosis and mitosis d. Amitosis alone
8. An epistase develops in the region of
a. Microphyle b. Chalaza c. Integument d. Nucellus
9. An endosperm having irregular boundaries is termed as
a. Nuclear b. Cellular c. Helobial d. Ruminant
10. The four celled stage of embryo is
a. Quadrant stage b. Octant stage c. Heart shaped stage d. Globular stage

Part B
Answer the following
Answer should not exceed 400 words or two pages

5 X 6=30

- 11.a. Define the term anomalous secondary growth and add a note on it.
(or)
- 11.b. Comment on secondary growth in dicotyledonous root.
- 12.a. Briefly mention the anatomical features of dicot stem.
(or)
- 12.b. Differentiate dicot and monocot leaves.
- 13.a. Mention the external secretory tissues found in plants.
(or)
- 13.b. Write down the characteristics of parenchyma.
- 14.a. Describe the different type of ovule.
(or)
- 14.b. Mention the routes of entry of pollen tube into ovule.
- 15.a. What are the functions of endosperm?
(or)
- 15.b. What is embryo? Explain.

Part C
Answer the following
Answer should not exceed 800 words or four pages

5 x 12=60

- 16.a. Classify meristems based on origin, plane of cell division, function and position in plant body .
(or)
- 16.b. Describe the components of phloem.
- 17.a. Give a detailed account on dicot stem with neat diagram.
(or)
- 17.b. Discuss the anatomical features of monocot root.
- 18.a. Explain how does secondary growth take place in stem.
(or)
- 18.b. Write an essay on anomalous secondary growth in *Boerhaavia*.
- 19.a. Explain the structure of microsporangium.
(or)
- 19.b. Give an illustrated account on development of female gametophyte.
- 20.a. Describe the different types of endosperm.
(or)
- 20.b. Explain the developmental pattern crucifer type of dicot embryo in detail.