

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

MSc DEGREE EXAMINATION MAY 2023
(Second Semester)

Branch – BOTANY

ANATOMY & EMBRYOLOGY

Time: Three Hours

Maximum: 50 Marks

SECTION-A (5 Marks)

Answer ALL questions

ALL questions carry EQUAL marks

(5 x 1 = 5)

1. Grass stem elongates by the activity of
(i) primary meristem (ii) secondary meristem
(iii) intercalary meristem (iv) apical meristem
2. Age of dicot tree can be approximately calculated from
(i) height of the tree (ii) annual rings
(iii) girth of the trunk (iv) number of branches
3. The fibrous thickening of endothecium is largely made up of
(i) pectin (ii) suberin
(iii) cutin (iv) cellulose
4. Stalk of the ovule is called as
(i) hilum (ii) tigellum
(iii) funicle (iv) none of these
5. Which one the following is a triploid tissue?
(i) endosperm (ii) nucellus
(iii) synergid (iv) antipodal cells

SECTION - B (15 Marks)

Answer ALL Questions

ALL Questions Carry EQUAL Marks

(5 x 3 = 15)

6. a) Show the nodal anatomy of angiosperms.
(OR)
b) Sketch the anatomy of dicot stem.
7. a) Discuss the anatomical characteristics of epiphytes.
(OR)
b) Determine the importance of wood anatomy.
8. a) Illustrate the structure of microsporangium.
(OR)
b) State the abnormal features of pollen germination in angiosperms.
9. a) Explain the features of embryology in relation to taxonomy.
(OR)
b) Show the structure and organization of mature embryo sac.
10. a) Discuss the types and importance of apomixis.
(OR)
b) Analyze the methods of seed dispersal in plants.

Cont...

SECTION -C (30 Marks)

Answer ALL questions

ALL questions carry EQUAL Marks

(5 x 6 = 30)

11. a) Explain the structure and functions of meristematic tissue.
(OR)
b) Assess the structure and functions of xylem elements.
12. a) Illustrate the anomalous secondary growth in *Achyranthes aspera*.
(OR)
b) Enumerate the types and significance of micortomy.
13. a) Construct the methods to overcome sexual incompatibility of plants.
(OR)
b) Analyze the structure and development of male gametophyte.
14. a) Classify the types of ovules with suitable examples.
(OR)
b) Appraise the types and practical significance of endosperms.
15. a) Catagorize the types and applications of polyembryony.
(OR)
b) Elucidate the phenomenon parthenocarpy.

Z-Z-Z

END