

**PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)**

**MSc DEGREE EXAMINATION MAY 2022
(Second Semester)**

Branch – **BOTANY**

ANATOMY AND EMBRYOLOGY

Time: Three Hours

Maximum: 50 Marks

SECTION-A (5 Marks)

Answer **ALL** questions

ALL questions carry **EQUAL** marks (5 x 1 = 5)

1. Which one of the following is a characteristic of the monocotyledons?
a) net veined leaves b) annual rings
c) seeds with two masses of stored food d) conducting tissue scattered throughout the stem
2. Where velamen cells in epiphytes are located?
a) below the endodermis b) below the epidermis
c) just outside the cortex d) just outside the exodermis
3. Name the compound that makes _____ fibrous thickening of endodermis
a) pectin b) suberin
c) cutin d) cellulose
4. Indicate which of the following is called stack of the ovule
a) hilum b) tigellum
c) funicle d) micropyle
5. Mention where Polyembryony commonly occurs
a) citrus b) turmeric
c) potato d) tomato

SECTION - B (15 Marks)

Answer **ALL** Questions

ALL Questions Carry **EQUAL** Marks (5 x 3 = 15)

6. a) Bring out the primary structure of dicot stem.
(or)
b) Compare and contrast dorsiventral and isobilateral leaf.
7. a) Explain the vasculature of floral parts in plants.
(or)
b) Sketch the anatomical structure of fruit wall.
8. a) Outline the structure of mature anther in angiospermic plants.
(or)
b) Describe the morphology and viability of pollen.
9. a) Classify the types of ovules in angiospermic plants.
(or)
b) Show the methods of fertilization and the biological significance the types and biological significance of fertilization.
10. a) Explain the types and importance of parthenocarpy.
(or)
b) Narrate the methods of dispersal of fruits and seeds.

Cont...

SECTION -C (30 Marks)

Answer **ALL** questions
ALL questions carry **EQUAL** Marks (5 x 6 = 30)

11. a) Examine the growth of the stelar region in a dicot stem.
(or)
b) Discuss the anomalous secondary growth in dicot stem.
12. a) Elucidate the anatomical adaptation of epiphytes.
(or)
b) Outline the anatomical characteristics of typical dicot seed.
13. a) Analyze the mechanism of pollen stigma incompatibility.
(or)
b) Examine the structure and development of male gametophyte.
14. a) Discuss the structure and development of dicot embryo.
(or)
b) Classify the types of endosperm with suitable examples.
15. a) Highlight the types and practical applications of polyembryony.
(or)
b) Analyze the types, classification and causes of apomixis.

Z-Z-Z

END