

(6 pages)

Reg. No. :

Code No. : 6799

Sub. Code : KBOM 23

M.Sc. (CBCS) DEGREE EXAMINATION, APRIL 2017.

Second Semester

Botany

ANATOMY, EMBRYOLOGY AND MORPHOGENESIS

(For those who joined in July 2016 onwards)

Time : Three hours

Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer :

1. Meristems that are located on lateral sides of shoot and roots are called

- (a) Cutin meristems
- (b) Lateral meristems
- (c) Vascular meristems
- (d) Epidermal meristems

2. Growth of lateral meristems is also known as

- (a) Primary growth
- (b) Secondary growth
- (c) Tertiary growth
- (d) Epidermal growth

3. Major categories of plants tissues are

- (a) Compound tissues
- (b) Simple tissues
- (c) Epidermal tissue
- (d) Both (a) and (b)

4. Cambium located on lateral parts of plants on outer side is called

- (a) Vascular cambium
- (b) Cork cambium
- (c) Shoot cambium
- (d) Root cambium

5. Type of cambium located between phloem and xylem is classified as

- (a) Shoot cambium
- (b) Root cambium
- (c) Vascular cambium
- (d) Cork cambium



6. Cork is formed from
 (a) Cork cambium (phellogen)
 (b) Vascular cambium
 (c) Phloem
 (d) Xylem
7. Double fertilization is characteristic of
 (a) Gymnosperms (b) Angiosperms
 (c) Monocots (d) Bryophytes
8. In angiosperm endosperm is
 (a) Haploid (b) Diploid
 (c) Triploid (d) None of the above
9. Porogamy is
 (a) Fertilization in which pollen tube enters the ovule through integument
 (b) Fertilization without pollen grain
 (c) Fertilization in which pollen tube enters the ovule through chalaza
 (d) Fertilization in which pollen tube enters the ovule through micropyl

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10. Monosporic eight nucleated female gametophyte is found in
 (a) Adoxa (b) Onion
 (c) Fritillaria (d) Polygonum

PART B — (5 × 5 = 25 marks)

Answer ALL questions choosing either (a) or (b).

Each answer should not exceed 250 words.

11. (a) Write a short notes on apical meristem.
 Or
 (b) Explain the structure of vascular cambium.
12. (a) Define -phloem.
 Or
 (b) Write notes on periderm.
13. (a) Describe the chemical properties of wood anatomy.
 Or
 (b) Define- Kranz anatomy.
14. (a) Write a short notes on pollen allergy.
 Or
 (b) What are the types of endosperm?

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15. (a) Explain the symmetry types.

Or

- (b) Which of the factors controlling morphogenesis?

PART C — (5 × 8 = 40 marks)

Answer ALL questions choosing either (a) or (b).

Each answer should not exceed 600 words.

16. (a) Give a detailed account on classification of meristem.

Or

- (b) Write brief notes on programmed cell death (PCD).

17. (a) Describe the primary structure of Plant tissues.

Or

- (b) Explain the anomalous secondary growth of plant.

18. (a) Write brief notes on defects in wood.

Or

- (b) Write an essay on dendrochronology.

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19. (a) Give an account on microsporogenesis.

Or

- (b) Explain- organogenesis of dicot embryo.

20. (a) Give a detailed account on plant morphogenesis.

Or

- (b) Write essay on factors controlling morphogenesis.
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