

(6 pages)

Reg. No. :

Code No. : 6868

Sub. Code :KBOM 23/
PBOM 23

M.Sc (CBCS) DEGREE EXAMINATION,
APRIL 2019.

Second Semester

Botany

ANATOMY, EMBRYOLOGY AND MORPHOGENESIS

(For those who joined in July 2016 and afterwards)

Time : Three hours

Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer :

1. Cambium is the example of which type of meristem?
- (a) Intercalary
 - (b) Lateral
 - (c) Fascicular
 - (d) Primary

2. Meristematic tissue inside mature vascular bundle is

- (a) phellem
- (b) procambium
- (c) interfascicular cambium
- (d) fascicular cambium

3. Cork cambium results in the formation of cork which becomes impermeable to water due to the accumulation of

- (a) Resins
- (b) Suberin
- (c) lignins
- (d) Tannins

4. Sieve tube cell is

- (a) Enucleated
- (b) Dead cell
- (c) Multinucleated
- (d) Pith

5. Wound healing is due to

- (a) Primary meristem
- (b) secondary meristem
- (c) vertical meristem
- (d) all of these

Page 2

Code No. : 6868



6. Vestigial stomata are found in
(a) Xerophytes
(b) Floating hydrophytes
(c) Submerged hydrophytes
(d) Mesophylls
7. Filiform apparatus is characteristic feature of
(a) Aleurone cell
(b) Synergids
(c) Generative cell
(d) Nucellar embryo
8. The polyembryony commonly occurs in
(a) Tomato (b) Potato
(c) Citrus (d) Turmeric
9. The origin and development of plant form and structure is called _____.
(a) Plant Morphogenesis
(b) Developmental Biology
(c) Evolutionary Biology
(d) Cell Growth

Page 3

Code No. : 6868

10. The establishment of differences at the two ends of a structure is known as
(a) Polyspermy
(b) Polarity
(c) Syngamy
(d) Symmetry

PART B — (5 × 5 = 25 marks)

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

Each answer should not exceed 250 words.

11. (a) Classify meristems based on position.
Or
(b) Explain root apical meristem.
12. (a) Give a brief account on periderm.
Or
(b) Briefly explain about xylem vessels.
13. (a) Explain the mechanical properties of wood.
Or
(b) Describe the structure of Kranz anatomy with suitable example.

Page 4

Code No. : 6868

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14. (a) Describe the structure of pollen wall.

Or

- (b) Discuss about Helobial endosperm.

15. (a) Write short notes on symmetry.

Or

- (b) Discuss about 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) Discuss the seasonal activity of cambium.

Or

- (b) Write an account on programmed cell death.

17. (a) Describe the secondary growth in dicot plant.

Or

- (b) Write an account on phloem.

18. (a) Explain the various defects in wood.

Or

- (b) Describe the stomata development.

Page 5 Code No. : 6868

19. (a) What is tapetum? Add notes on its types and functions of tapetum.

Or

- (b) Give an account on apomixis.

20. (a) Give an account on polarity.

Or

- (b) Define differentiation. Explain the effect of environment on differentiation.

Page 6 Code No. : 6868

