

(6 pages)

Reg. No. :

Code No. : 10530 E Sub. Code : CMBO 51

B.Sc. (CBCS) DEGREE EXAMINATION,
NOVEMBER 2024.

Fifth Semester

Botany — Core

CELL BIOLOGY AND EMBRYOLOGY OF
ANGIOSPERMS

(For those who joined in July 2021-2022 only)

Time : Three hours

Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer :

1. Nucleoid is seen in

- (a) Bacteria
- (b) Blue green algae
- (c) Both (a) and (b)
- (d) Higher plants

2. During which phase of the mitosis movement of chromosome occurs

- (a) Telophase (b) Metaphase
- (c) Prophase (d) Anaphase

3. Which of the following is known as the suicide bag of a cell?

- (a) Mitochondria (b) Golgi Complex
- (c) Lysosome (d) Nuclei

4. Protein synthesis takes place in which of the following cell organelle

- (a) Cell wall (b) Ribosome
- (c) Nucleus (d) Cytoplasm

5. Generative nucleus divides forming

- (a) 3 male nuclei (b) 3 male nuclei
- (c) 2 female nuclei (d) 3 female nuclei

6. Functional megaspore in an angiosperm develops into

- (a) Endosperm (b) Embryo
- (c) Embryo-sac (d) Ovule

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7. Double fertilization was discovered by
(a) Bilgrami (b) Nawaschin
(c) Reinert (d) Bhojwani
8. Double fertilization results in the formation of
(a) Embryo only (b) Zygote only
(c) Endosperm only (d) Endosperm and Zygote
9. In plants, apomixis pertains to plant development
(a) from root cuttings
(b) from cutting of stem
(c) without the gametes
(d) fusion of gametes
10. Occurrence of two or more embryos in one ovule
(a) Polyembryony
(b) Nucellus
(c) Parthenocarpy
(d) Embryogenesis

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PART B — (5 × 5 = 25 marks)

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

Each answer should not exceed 250 words.

11. (a) Draw the cell cycle.
Or
(b) List down the stages of Mitosis.
12. (a) Illustrate the structure of endoplasmic reticulum.
Or
(b) How will you account structure of golgi complex?
13. (a) Highlight the internal structure of anther.
Or
(b) List down the types of ovules.
14. (a) Give an account of pollination.
Or
(b) Explain the structure of nuclear endosperm.

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15. (a) Bring out the importance of parthenocrapy.

Or

- (b) Write notes on Polyembryony.

PART C — (5 × 8 = 40 marks)

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

Each answer should not exceed 600 words.

16. (a) Trace the various stages of the meiotic cell division.

Or

- (b) Explain the structure of a plant cell.

17. (a) Highlight the structural organization of mitochondria.

Or

- (b) Bring out the structural features of chloroplast.

18. (a) Describe the structure of anther.

Or

- (b) Write an essay on the megasporogenesis.

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19. (a) What do you mean by double fertilization?
How is it significant in plant development?

Or

- (b) Describe the development of monocot embryo.

20. (a) Write an essay on apomixes.

Or

- (b) Explain in detail the applications of parthenogenesis.

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