

19. (a) Write the pathway of Apoptosis
Or
(b) Write an account on the role of CDK protein in check points.
20. (a) Elaborate the sources and types of stemcell
Or
(b) Write the morphology and function of stem cells.

PART C — ($3 \times 10 = 30$)

Answer any THREE questions.

21. Describe the structure and function of Lipid bilayer of Plasma
22. Draw the structure and function of Mitochondria
23. Write an Essay on cell ECM interaction
24. Explain the different stages of Mitosis
25. Write the Different stages of Embryonic stem cell
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S.No. 6081

P 22 BCCC 1 A

(For candidates admitted from 2022–2023 onwards)

M.Sc. DEGREE EXAMINATION, NOVEMBER 2023.

Biochemistry – Core Choice Course

CELL BIOLOGY

Time : Three hours

Maximum : 75 marks

PART A — (20 marks)

Answer ALL questions.

- I. (A) Multiple choice questions : ($5 \times 1 = 5$)
1. Lipid molecule in plasma membrane are arranged in
- (a) Scattered (b) Series
- (c) Alternative (d) Head Parallel
2. Which of the cell organelles synthesizes steroid
- (a) Nucleus (b) ER
- (c) Peroxisomes (d) Golgi body

3. All of the following are component of Extra cellular Matrix except

- (a) Collagen (b) Actin
- (c) Fibronectin (d) Elastin

4. Nucleosomes are combination of DNA with

- (a) Histones (b) carbohydrates
- (c) lipids (d) vitamins

5. Which of the following stem cells are known as true stem cell

- (a) Totipotent (b) Germi potent
- (c) non-potent (d) pluripotent stem cell

(B) Fill in the blanks : (5 × 1 = 5)

6. Ingestion of large food materials by plasma membrane is _____

7. ATP is formed from _____

8. Belt desmosomes are otherwise called as _____

9. Asters are formed by _____

10. Adult stem cell are described as _____

II. Answer ALL the questions. (5 × 2 = 10)

11. What is Exocytosis?

12. What is Plastids?

13. What are Cadherins?

14. What is chromosome?

15. Define stem cell

PART B — (5 × 5 = 25)

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

16. (a) Brief about plant cell wall

Or

(b) Discuss about active transport.

17. (a) Write structure and function of Chloroplast

Or

(b) What is Endoplasmic reticulum? list out the types of ER

18. (a) Write a short note on desmosomes

Or

(b) Explain briefly about microfilaments