

D 50561

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Name.....

Reg. No.....

**FIFTH SEMESTER (CBCSS—UG) DEGREE EXAMINATION
NOVEMBER 2023**

Botany

BOT 5B 09—CELL BIOLOGY AND BIOCHEMISTRY

(2019 Admission onwards)

Time : Two Hours

Maximum : 60 Marks

Section A*Answer all questions.**Each question carries 2 marks.**Ceiling : 20 Marks.*

1. What is Interphase ? Mention its significance.
2. Draw the labelled diagram of mitochondria.
3. Differentiate between rough and smooth endoplasmic reticulum.
4. What are complex lipids ? Give an example.
5. Name the meiotic stage at which crossing over happens. Mention the genetic effects of crossing over.
6. What is Mitosis ? Mention its significance.
7. What are the functions of vacuoles in a cell ?
8. What is fatty acid ? Give an example for saturated fatty acid.
9. What is Isozyme ? Give an example.
10. Define Dipeptide.
11. Differentiate between active site and allosteric site.
12. What are poly saccharides ? Give an example.

Turn over

Section B

Answer all questions.

Each question carries 5 marks.

Ceiling : 30 Marks.

13. With a suitable diagram, explain the fluid mosaic model of plasma membrane.
14. Discuss the numerical aberrations of chromosomes.
15. Describe the important events that occur during prophase-1 of meiosis.
16. Write an account on secondary metabolites in plants and discuss their roles.
17. Briefly explain the structural levels of proteins.
18. Write a note on classification of carbohydrates with examples.
19. How do you classify amino acids.

Section C

Answer any one question.

The question carries 10 marks.

Ceiling : 10 Marks.

20. Explain the structure and functions of special types of chromosomes.
21. Discuss the mechanism of enzyme action and the factors which influences it. Describe ways of enzyme inhibition.

(1 × 10)