D 50561 **(Pages : 2)** **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 the various ways of enzyme inhibition.

(1 × 10 = 10 marks)