



QP CODE: 25050438



25050438

Reg No :

Name :

MSc DEGREE (CSS) EXAMINATION DECEMBER 2025

First Semester

M Sc BIOINFORMATICS

**Core Courses - BT010101 - FUNDAMENTALS OF CELL BIOLOGY AND
BIOCHEMISTRY**

2019 Admission Onwards

BC519710

Time: 3 Hours

Weightage: 30

Part A (Short Answer Questions)

*Answer any **eight** questions.*

Weight 1 each.

1. Briefly list out the functions of cytoskeletal proteins.
2. What are ras and raf oncogenes?
3. What is the difference between reducing and non reducing sugars? Cite with examples.
4. What are the functions of glycosaminoglycans and proteoglycans?
5. What are the different types of phospholipids and their functions?
6. What are the different functions of nucleotides ?
7. What are motifs? Give examples.
8. What are Auxins? Highlight their important functions.
9. What is the mechanism of action of steroid hormones?
10. What are neurotransmitters?

(8×1=8 weightage)

Part B (Short Essay/Problems)

*Answer any **six** questions.*

Weight 2 each.

11. Explain on Peroxisomes, lysosomes and receptor mediated endocytosis.
12. Comment on the significance and differences in mitotic and meiotic cell division.
13. Discuss on the role of cholesterol in biochemistry.
14. Give a brief account on classification of amino acids.





15. Briefly describe the functions of abscisic acid and ethylene.
16. Discuss the importance of hormones secreted from the adrenal cortex.
17. Give a brief account on structure and functions of any two fat soluble vitamins.
18. Briefly describe on the deficiency diseases associated with water soluble vitamins.

(6×2=12 weightage)

Part C (Essay Type Questions)

*Answer any **two** questions.*

Weight 5 each.

19. Elucidate the signalling pathways involved in apoptosis and breakdown of glycogen.
20. Give a detailed account on the Watson Crick model of double stranded DNA and its polymorphic forms.
21. Describe in detail the fine structures of collagen, myoglobin and hemoglobin.
22. Briefly describe the classification of hormones and highlight their functions.

(2×5=10 weightage)

