QP CODE: 25047320

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Reg No : .....

Name : .....

M.Sc DEGREE (CSS) EXAMINATION, NOVEMBER 2025

Third Semester

M Sc ZOOLOGY

Core Course - ZL010302 - CELL AND MOLECULAR BIOLOGY

2019 ADMISSION ONWARDS

94D39862

Time: 3 Hours Weightage: 30

Part A (Short Answer Questions)

*Answer any **eight** questions.*

*Weight **1** each.*

1. Give note on Collagen.
2. Give note on Desmosomes.
3. What are peroxisomes?
4. Give note on Extracellular messengers.
5. Write short note on JAK- STAT pathway.
6. Comment on 43S and 48S preinitiation complexes in translation.
7. What is the role of various small RNA molecules in gene regulation.
8. What is the difference between benign and malignant tumour?
9. What are the causes of cancer?
10. "Tumor suppressor genes are considered as the 'cell's brakes'"- Explain.

(8×1=8 weightage)

Part B (Short Essay/Problems)

*Answer any **six** questions.*

*Weight **2** each.*

11. Give a detailed note on dynamic nature of the plasma membrane.
12. Give an account on non muscle motility.
13. How does the MAP kinase cascade alter the transcription activity of a cell?
14. What are Second messengers in cell signaling? Identify its role and functions.
15. Attenuation is the premature termination of translation. Justify the statement.

16. Comment on chromatin remodelling complexes.

17. Comment on the role of p53 gene in cell cycle arrest.

18. Explain the process of metastasis.

(6×2=12 weightage)

Part C (Essay Type Questions)

*Answer any **two** questions.*

*Weight **5** each.*

19. Explain the structure and functions of Endoplasmic reticulum.

20. Explain the signal transduction by G-Protein Coupled receptors.

21. Write an essay on Transcription in eukaryotes.

22. Write an essay on new strategies for combating cancer.

(2×5=10 weightage)