

STELLA MARIS COLLEGE (AUTONOMOUS) CHENNAI –600 086
(For candidates admitted from the academic year 2019 – 2020 & thereafter)

SUBJECT CODE: 19BI/PC/MB24
M. Sc. DEGREE EXAMINATION, APRIL 2023
BIOINFORMATICS
SECOND SEMESTER

COURSE : CORE
PAPER : MOLECULAR BIOLOGY
TIME : 3 HOURS

MAX. MARKS: 100

SECTION – A

ANSWER ALL QUESTIONS

(20 x 1=20)

1. Nucleotide.
2. Types of histones.
3. Anaphase.
4. Chiasmata.
5. Semiconservative method.
6. Telomerase
7. Lagging strand.
8. DNA polymerase I.
9. t- RNA structure.
10. Wobble base pairing.
11. Shine Dalgarno Sequence.
12. Peptidyl transferase.
13. rbcL and rbcS
14. Cytochrome oxidase.
15. Plasmagenes.
16. Heat shock genes.
17. Hormone receptors.
18. Tumour suppressor genes.
19. Protooncogenes
20. Signalling molecules.

SECTION – B

ANSWER ANY FOUR QUESTIONS. DRAW DIAGRAMS WHEREVER NECESSARY

(4 x 10 = 40)

21. Explain the stages of cell cycle with regulation points.
22. Give an account on the structure of chromosome.
23. Briefly describe the mechanism of transcription in prokaryotes.
24. Elucidate the genetic control of vertebrate immune system.
25. Write details on the structure and assembly of ribosomes.
26. Highlight the details on the structure and functions of chloroplast genome.
27. How are signalling pathways are regulated?

SECTION – C

ANSWER ANY TWO QUESTIONS. DRAW DIAGRAMS WHEREVER NECESSARY
(2 x 20 = 40)

28. Elaborate on the details of organization of eukaryotic genome.
29. Describe the regulation of gene expression in prokaryotes.
30. Discuss the transcription and translation process in mitochondria.
31. Explain the immunotherapy of cancer and regulation of cell death.
