STELLA MARIS COLLEGE (AUTONOMOUS) CHENNAI 600 086
(For candidates admitted during the academic year 2011 – 12 & thereafter)

SUBJECT CODE: 11BY/PC/CM14

M. Sc. DEGREE EXAMINATION - NOVEMBER 2014
BIOTECHNOLOGY
FIRST SEMESTER

COURSE : CORE
PAPER : CELL AND MOLECULAR BIOLOGY
TIME : 3 HOURS **MAX. MARKS: 100**

SECTION – A

ANSWER ALL QUESTIONS: **(20 x 1 = 20)**

DEFINE / EXPLAIN THE FOLLOWING.

1. Unit membrane
2. Episomes
3. Actin and Myosin
4. Glycocalyx
5. Central dogma
6. Nucleotide and nucleoside
7. 16S rRNA
8. Sigma factors
9. SAT chromosome
10. Chloroplast DNA
11. Chaperones
12. Jumping genes
13. Pribnow box
14. Wobble hypotheses
15. Repressors
16. Homeotic genes
17. Carcinoma
18. Invasiveness
19. Tumour suppressor genes
20. Mutagens

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SECTION – B

ANSWER ANY FOUR QUESTIONS: (4 x 10 = 40)

21. Bring out the details in the organization of plasma membrane.
22. Enumerate and explain the properties of genetic code.
23. Describe the organization of repetitive DNA sequence and its significances.
24. Explain about split genes and its importance in eukaryotes.
25. Give the mechanisms of transcriptional controls in prokaryotes.
26. Write notes on molecular approaches to treat cancer.

SECTION – C

ANSWER ANY TWO QUESTIONS: (2 X 20 = 40)

27. Write in detail the various mechanisms of cell communications.
28. Illustrate and explain the mechanisms of DNA damage and repair.
29. Explain the models about the organization of eukaryotic chromosomes.
30. Explain about genes regulating the cell cycle.

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