STELLA MARIS COLLEGE (AUTONOMOUS) CHENNAI 600 086
(For candidates admitted during the academic year 2015 – 2016 & thereafter)

SUBJECT CODE: 15BY/PC/MB14

M. Sc. DEGREE EXAMINATION - NOVEMBER 2017
BIOTECHNOLOGY
FIRST SEMESTER

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

SECTION – A

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

1. Give the function of Glycocalyx.
2. Write the size and structure of myosin.
3. What is pinocytosis?
4. What are desmosomes?
5. Write a note on Z – DNA.
6. What are Okazaki fragments?
7. Name the different subunits of rRNA.
8. Write the stop codons.
9. What is a cistron?
10. What are plasmids?
11. What is a Genome?
12. Write the significance of transposon.
13. Give the functions of HSPs.
14. What are homeotic genes?
15. Write the process of transcription.
16. What is attenuation?
17. Give the role of Ethidium bromide.
18. What are Probes?
19. Expand CDKs
20. Write the applications of PAGE.

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SECTION – B

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

21. Explain the G-protein coupled receptor signaling pathway.
22. Describe the process of DNA replication in eukaryotes.
23. Write short notes on the lac operon.
24. Give an account on mobile DNA in eukaryotes.
25. Describe the process of apoptosis.
26. Chart out the steps involved in the isolation of DNA.
27. Elucidate the structure and functions of the plasma membrane.

SECTION – C

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

28. Give an account on the cytoskeleton.
29. Describe protein synthesis. Add a note on the post translational modifications.
30. Write in detail on transcriptional regulation in eukaryotes.
31. Discuss the various events in the eukaryotic cell cycle.

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