

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

SUBJECT CODE: 11BY/PC/CM14

M. Sc. DEGREE EXAMINATION, NOVEMBER 2011
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. Endosymbiosis
2. Unit Membrane concept
3. Elementary particles
4. Adhesive fibrous proteins
5. Okazaki fragments
6. Antisense RNA
7. B DNA & Z DNA
8. Selfish DNA
9. Cot curve
10. Overlapping genes
11. Cryptic genes
12. Nucleolar Organizing Regions
13. snRNA genes
14. Pseudogenes
15. Pribnow Box
16. Rho factor
17. Zinc finger
18. Apoptosis
19. *ras* gene
20. Ames test

SECTION – B

ANSWER ANY FOUR QUESTIONS:

(4 x 10 = 40)

21. Write short notes on the mechanism of Cell communication.
22. Explain about the experiments of Meselson and Stahl's.
23. Comment on jumping DNA found in eukaryotes.
24. Write details on post transcriptional regulation mechanism with illustration.
25. Describe about intrinsic and extrinsic pathways during apoptosis.
26. Briefly explain about translational regulation in bacteria.

SECTION – C

**ANSWER ANY TWO QUESTIONS: DRAW DIAGRAMS WHEREVER
NECESSARY:**

(2 X 20 = 40)

27. Enumerate with short notes on various enzymes involved in DNA replication.
28. Explain in detail the organization of eukaryotic genome.
29. Describe cellular responses mediated by G protein linked receptors.
30. Give the molecular organization of oncogenes and tumour suppressor genes. Add notes on cancer therapy.
