

STELLA MARIS COLLEGE (AUTONOMOUS) CHENNAI 600 086
(For candidates admitted during the academic year 2009 – 10)

SUBJECT CODE: BY/PC/CM14

M. Sc. DEGREE EXAMINATION, NOVEMBER 2009

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)

1. CAT box
2. Primosome
3. Cell theory
4. Provirus
5. Inducer
6. Central dogma of molecular biology
7. Genetic code.
8. Dam
9. Operon
10. Microfilaments
11. Prokaryote
12. uvr A & B
13. Rho factor
14. int & xis gene
15. Temperate phage
16. Redundancy
17. Apoptosis
18. Repressor
19. Oncogene
20. Attenuation

SECTION – B

ANSWER ANY FOUR QUESTIONS:

(4 x 10 = 40)

21. Illustrate the nature of the DNA & its types.
22. Differentiate prokaryote and eukaryote.
23. Write a short note on mobile DNA.
24. Write a brief account on replication.
25. Write a short note on DNA methylation.
26. Illustrate the genes regulating cell cycle.

SECTION – C

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

(2 X 20 = 40)

27. Give a detailed account on DNA damage and repair.
28. Explain the life cycle of Lambda phage.
29. Write the detailed account on motility of cell and its constitution.
30. Explain the following
 - a) Wobble hypothesis.
 - b) Receptors involved in signal transduction.
