

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086
(For Candidates admitted during the academic year 2008 – 09 & thereafter)

SUBJECT CODE: ZL/MC/CM54

B.Sc. DEGREE EXAMINATION NOVEMBER 2011
BRANCH VI A – ADVANCED ZOOLOGY & BIOTECHNOLOGY
FIFTH SEMESTER

COURSE : MAJOR CORE

PAPER : CELL AND MOLECULAR BIOLOGY

TIME : 3 HOURS

MAX. MARKS: 100

SECTION – A

ANSWER ALL QUESTIONS

(10 x 3 = 30)

1. What is meant by Volvox theory?
2. Define a. prokaryote b. nucleoid c. endosymbiont.
3. Differentiate between cell membrane and cell wall.
4. Comment on Lysosomes.
5. State the function of a. rho protein b. histones c. Anti sense RNA
6. What is the difference between phosphorylation and glycosylation?
7. What are the phases seen in a cell cycle?
8. Write short notes on nucleolar organizer.
9. What is a Dideoxy nucleotide and its use?
10. Define Gene therapy. Give an example.

SECTION – B

ANSWER ANY FIVE QUESTIONS

(5 x 6 = 30)

11. Explain briefly the structure of a prokaryote.
12. Write briefly on the functions of Golgi complex.
13. Write short notes on promoters.
14. Give an account of nucleopores.
15. Explain briefly any two transcription factors.
16. Discuss the lac operon.
17. What is meant by semi conservative method of replication?

SECTION – C

ANSWER ANY TWO QUESTIONS

(2 x 20 = 40)

18. Write an account of the structure and functions of mitochondria.
19. Describe in detail the mechanism of translation.
20. Explain the various types of RNA and their functions.
21. Describe in detail the Dideoxy method of gene sequencing.
