

**STELLA MARIS COLLEGE (AUTONOMOUS) CHENNAI 600 086**  
**(For candidates admitted during the academic year 2005 – 2006 & thereafter)**

**SUBJECT CODE: ZL/MO/ML64**

**B. Sc. DEGREE EXAMINATION APRIL 2010**  
**BRANCH – VI.A. – ADVANCED ZOOLOGY & BIOTECHNOLOGY**  
**SIXTH SEMESTER**

**COURSE : MAJOR – OPTIONAL**  
**PAPER : MOLECULAR BIOLOGY**

**TIME : 3 HOURS** **MAX. MARKS: 100**

**SECTION – A**

**ANSWER ALL QUESTIONS: (10 X 3 = 30)**

1. What is meant by Okazaki fragment?
2. Define a. RNA primer      b. Helicase      c. rho proteins.
3. Differentiate between induction and repression.
4. Comment on histones.
5. Expand a. PCR      b. RFLP      c. Mab.
6. What is the difference between phosphorylation and glycosylation?
7. What is the significance of S phase?
8. Write short notes on dideoxynucleotides.
9. Name any 2 factors that regulate cell proliferation.
10. Define molecular medicine. Give an example.

**SECTION – B**

**ANSWER ANY FIVE QUESTIONS: (5 X 6 = 30)**

11. Explain briefly the theta model of DNA replication.
12. Write briefly on the types of DNA polymerases.
13. Write short notes antisense RNA.
14. Give an account of nucleosome.
15. Explain briefly any two transcription factors.
16. Discuss the cell cycle.
17. What is meant by SCID?

**SECTION – C**

**ANSWER ANY TWO QUESTIONS:**

**(2 X 20 = 40)**

18. Write an account of biosynthesis of various RNAs.
19. Describe in detail the mechanism of translation.
20. Explain the lac Operon concept.
21. Describe in detail the Sanger's method of gene sequencing.

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