

**STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086**  
**(For Candidates admitted during the academic year 2005-06 & thereafter)**  
**SUBJECT CODE: ZL/MC/GE54**

**B.Sc. DEGREE EXAMINATION NOVEMBER 2009**  
**BRANCH VI A – ADVANCED ZOOLOGY & BIOTECHNOLOGY**  
**FIFTH SEMESTER**

**COURSE : MAJOR CORE**  
**PAPER : GENETIC ENGINEERING**  
**TIME : 3 HOURS**

**MAX. MARKS: 100**

**SECTION – A**

**ANSWER ALL QUESTIONS**

**(10 x 3 = 30)**

1. What is chimeric DNA?
2. Define Genes
3. Write a note on klenow enzyme?
4. What is Transposon?
5. Explain Pbr 322.
6. Define cosmid.
7. What is Electroporation?
8. Define stem cell.
9. What is vaccine?
10. Explain Splicing.

**SECTION – B**

**ANSWER ANY FIVE QUESTIONS**

**(5 x 6 = 30)**

11. Write a note on the Restriction Endonucleases.
12. Write the various methods of transfer of foreign DNA in to the cells.
13. Explain the procedure adopted for DNA finger printing.
14. Give an account on the Western Blot technique.
15. Give an account on the natural culture media for culturing animal cells.
16. Explain the steps involved in PCR technique.
17. Write a note on Gene therapy.

**SECTION – C**

**ANSWER ANY TWO QUESTIONS**

**(2 x 20 = 40)**

18. Give in detail how the cloning is done in Eukaryotes.
19. Explain the various methods of immobilization of enzymes.
20. Write a detailed account on the application of Genetic engineering.
21. Explain how Monoclonal antibodies are produced.

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