

**STELLA MARIS COLLEGE (AUTONOMOUS) CHENNAI –600 086**

**(For candidates admitted during the academic year 2015-2016)**

**SUBJECT CODE: 15BY/PC/RD24**

**M. Sc. DEGREE EXAMINATION, APRIL 2016**

**BIOTECHNOLOGY**

**SECOND SEMESTER**

**COURSE : CORE**  
**PAPER : RECOMBINANT DNA TECHNOLOGY**  
**TIME : 3 HOURS**

**MAX. MARKS: 100**

**SECTION – A**

**ANSWER ALL THE QUESTIONS**

**(20 x 1 = 20)**

1. S1 nuclease
2. Reverse transcriptase
3. BAL 31 nuclease
4. Poly nucleotide kinase
5. Expand pBR322
6. L blue print vectors
7. Linkers
8. Homopolymer tailing
9. YACS
10. Marker genes
11. c DNA
12. Fusion protein
13. VNTR
14. SCAR
15. RFLP
16. Site directed mutagenesis
17. Mono clonal antibodies
18. Cry genes
19. Vaccines
20. Biopesticides

**SECTION – B**

**ANSWER ANY FOUR QUESTIONS IN ABOUT 600 WORDS**

**(4x 10 = 40)**

21. What are restriction endonucleases? Explain its properties.
22. Describe the roles of DNA polymerase in *in vivo*
23. Explain the properties of plasmids.
24. Describe the roles of vectors in gene library construction.
25. What is shot gun cloning?
26. Explain chromosome walking.
27. Describe gene therapy for inherited disorders.

**SECTION – C**

**ANSWER ANY TWO QUESTIONS IN ABOUT 1500 WORDS**

**(2x 20 = 40)**

28. Describe reverse transcriptase and their activity and mode of action.
29. Explain the isolation & purification of plasmids.
30. Explain the strategies adopted for recombinant gene selection and screening.
31. Describe the role of recombinant DNA technology in mabs and insulin production.

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