

**STELLA MARIS COLLEGE (AUTONOMOUS) CHENNAI –600 086**  
**(For candidates admitted from the academic year 2008-09 & thereafter)**  
**SUBJECT CODE: BI/PC/BT25**  
**M. Sc. DEGREE EXAMINATION, APRIL 2010**  
**BIOINFORMATICS**  
**SECOND SEMESTER**

**COURSE : MAJOR – CORE**  
**PAPER : BIOTECHNOLOGY**  
**TIME : 3 HOURS** **MAX. MARKS: 100**

**SECTION – A**

**ANSWER ALL THE QUESTIONS**

**(20 x 1 = 20)**

**Define / Explain the following:**

1. Linkers and adaptors.
2. Reporter gene.
3. Taq polymerase.
4. Binary - Vector system
5. Dicer
6. Fusion proteins
7. Golden Rice
8. Micro satellites
9. ARS
10. C-DNA library
11. Chimera.
12. RAPD
13. Fosmid
14. Primer
15. Magic Bullets
16. Humulin
17. Somatic gene therapy
18. YAC
19. VNTR
20. Clone

**SECTION - B**

**Answer any FOUR of the following; each answers not exceeding 500 words. Draw diagram wherever necessary. (4x10=40)**

21. List the characteristics of a cloning vector.
22. Explain the different methods of plant transformation procedure.
23. Detail on Yeast Plasmid vector.
24. How are recombinants screened or selected.
25. Explain RFLP.
26. Write a short note on automated DNA sequencer.
27. Write a note on eukaryotic gene cloning.

**SECTION - C**

**Answer any TWO of the following, each answer not exceeding 1200 words. Draw diagram wherever necessary. (2x20=40)**

28. Explain the applications of gene cloning in agriculture.
29. Detail on gene therapy.
30. Explain the gene sequencing techniques.
31. What is PCR? List its types and application in genetic engineering.

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