

**D.K.M. COLLEGE FOR WOMEN (AUTONOMOUS), VELLORE-1****SEMESTER EXAMINATIONS****APRIL - 2017****15CBT4A****RECOMBINANT DNA TECHNOLOGY**

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**Time : 3 Hours****Max. Marks : 75****SECTION – A (10 x 2 = 20)****Answer ALL the questions.**

1. What is Methylase?
2. Mention the role of ligase enzyme.
3. What are plasmids?
4. Define transduction.
5. Define DNA probe.
6. Write the advantages of automated sequencing.
7. Define copy number.
8. Define Shuttle vector.
9. Give any four application of PCR.
10. Mention the uses of RAPD.

**SECTION – B (5 x 5 = 25)****Answer any FIVE of the following questions.**

11. Explain briefly about DNA modifying enzymes.
12. Explain the types of restriction enzymes.
13. Write notes on electroporation.
14. Discuss briefly on Maxam Gilbert chemical sequencing method.
15. Explain pBR322 and its advantages.
16. Describe the construction of BAC.
17. Describe the selection of recombinant DNA.
18. Explain the procedure and application of RFLP.

**SECTION – C (3 x 10 = 30)****Answer ALL the questions.**

19. (a) Explain Southern blotting technique.

(Or)

- (b) Explain lytic and lysogenic cycles.

20. (a) Discuss about sanger's method of DNA sequencing.

(Or)

- (b) Explain the construction of cDNA libraries.

21. (a) Explain the principle and technique of PCR.

(Or)

- (b) Write notes on i) Microinjection. ii) Liposome fusion. iii) Microprojectile.