Register Number…………………..

M.TECH DEGREE EXAMINATIONS: NOVEMBER 2009

Third Semester

BIOTECHNOLOGY

P07BTE34 Genomics and Proteomics

Time: Three Hours   **Maximum Marks: 100**

Answer ALL questions:-

PART A (10 x 2 = 20 Marks)

1. Distinguish between eubacteria and archea bacteria..

2. What are genome wide repeats? Give its type.

3. Distinguish between double restriction and partial restriction.

4. What are Contigs?

5. What are Reporter genes? Give example.

6. What is 5'- RACE?

7. What do you mean by Tandem MS-MS?

8. Define native gel electrophoresis.

9. What is intron homing.

10. Justify the need of using 2-DE with immobilized pH gradients over conventional method.

PART B (5 X 16 = 80 Marks)

11. (a) Explain in detail how the genes are organized in a eukaryotic nuclear genome. (16)

(OR)

  (b) (i)What is C Value paradox? Explain its importance in genome study.   (8)

   (ii) Write short notes on interphase chromatin.   (8)

12. (a) (i) Discuss how FISH can be used to map genome location even if there is no genetic variation present at given position. (8)

(ii) Describe Chromosome walking by PCR. (8)

(OR)

(b) How sequence assembly is achieved through shot gun method. (16)

13. (a) Describe SAGE in detail. (16)

(OR)

(b) Elaborate on Differential display PCR. (16)

14. (a) Describe in detail the Peptide Mass Fingerprinting. (16)

(OR)

(b) (i) Elaborate the principle of MALDI-TOF. (8)

(ii) How proteins are detected on SDS-gels. (8)

15. (a) List the possible ways of Post Translational modifications with an example. (16)

(OR)

(b) Explain the various techniques used for the analysis of Phosphoproteins. (16)

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