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V 4052

B.E./B.Tech. DEGREE EXAMINATION, APRIL/MAY 2008.

Eighth Semester

Biotechnology

BT 1016 — GENEOMICS AND PROTEOMICS

(Regulation 2004)

Time : Three hours

Maximum : 100 marks

Answer ALL the questions.

PART A — (10 × 2 = 20 marks)

1. Write short notes on the importance of histone in genome organization.
2. What is the role of non coding sequence in genome organization?
3. What are jumping genes?
4. Write the application of micro array techniques.
5. What is meant by ORF?
6. Write a brief note on substrative DNA hybridization.
7. What is peptide mass finger printing?
8. Write the working principle of 2D gel electrophoresis?
9. List out the different types of post-translation modifications with example.
10. Write the significance of protein-protein interaction in biological system.

PART B — (5 × 16 = 80 marks)

11. (a) Explain in detail the structural organizing of gene with clear diagram.

Or

(b) Explain the RNA splicing in detail and highlight the significance in the coding of protein.

12. (a) What are the different methods of genome sequencing? Explain any one in detail.

Or

(b) Describe the different types of genetic mapping in detail.

13. (a) Describe the method SAGE in detail and its application.

Or

(b) Define annotation with an example. Explain any one method for predicting the function of gene.

14. (a) Explain the method for finding the size of protein using MALDI-TOF.

Or

(b) How will you predict primary sequence of a protein using Edman degradation method?

15. (a) Write short notes on :

(i) Glyco protein analysis (8)

(ii) Short gun cloning. (8)

Or

(b) Write short notes on :

(i) Phospho protein analysis (8)

(ii) Methylation of protein. (8)