

D. Tiram Rat

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT
TEST -2 EXAMINATION, OCTOBER 2018

B.Tech (Bioinformatics) V Semester

Course Code: 15B11BI512

MAX. MARKS: 25

Course Name: Computational Genomics

Course Credits: 04

MAX. TIME: 1.5 Hr

Note: All questions are compulsory. Carrying of mobile phone during examinations will be treated as case of unfair means. Calculator is allowed.

1. How the evolution of sequence similarity based methods was realized. Plan your answer with the inclusion of FASTA and BLAST. [3]
2. Explain all major steps of microarray data analysis in a systematic manner. [5]
3. Discuss the need, development and evolution of gene expression analysis methods. [2]
4. What are NGS methods? Explain any one with all its parameters. [2]
5. What are various clustering techniques? Discuss their classification in detail with their respective description. [4]
6. Define hybridization. Discuss role of color coding scheme in hybridization. [3]
7. Consider two gene expression profiles: $A = [2, 4, 7, 8]$; $B = [1, 3, 5, 9]$
Compute Pearson's correlation coefficient for the given profiles. [4]
8. Discuss following briefly:
 - (a) Euclidean Distance for microarray data set
 - (b) SAGE[1*2 = 2]