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BICSE-008

B.Tech. – VIEP – COMPUTER SCIENCE AND ENGINEERING (BTCSVI)

00405 **Term-End Examination**

December, 2014

BICSE-008 : BIO-INFORMATICS

Time : 3 hours *Maximum Marks : 70*

Note : *Answer any **seven** questions. All questions carry equal marks.*

1. Define Bio-informatics. What are the different parts in biological databases ? Explain. *10*

2. What is sequence alignment ? Explain the dynamic programming sequence alignment. *10*

3. Explain NMR and Xtallography. Give some examples. *10*

4. Write short notes on the following :

   (a) RNA secondary architecture *5*

   (b) Microarrays *5*

5. What is structural genomics ? State and indicate the review of structural genomics. *10*

6. Write the concept of 1D Motifs. What are the different representations in 1D Motifs ? *10*

7. State and explain MUSTA algorithms for geometric hashing . *10*

8. Discuss the different Hidden Markov models. *10*

9. With a neat diagram explain the protein structure prediction. *10*

10. Explain comparative genomics algorithms. *10*