Bioinformatics -I 28/11/16

TE/V/CBSGS/BIOTECH/BI-I (21)

Q. P. Code : 569000

(3 Hours) **(Total Marks : 80)**

N.B. (1) Question **No.1** is **compulsory**
(2) Attempt any **three** questions out of remaining **five** questions
(3) Each question carries **equal** marks
(4) **Illustrate** answers with **sketches** wherever required

1. Write Short Notes on: **20**
   (a) Chao-Fasman alogrithm
   (b) Neural networks
   (c) BLAST
   (d) NCBI

2. (a) Explain different DNA sequencing methods. **10**
   (b) Describe drug discovery. **10**

3. (a) Explain different types of alignments. **10**
   (b) What is a database? Explain different types of database based on storage. **10**

4. (a) Perform Needleman-Wunsch Algorithm for the given nucleotide sequence **12**
   Seq 1: ATCCG
   Seq2: AGTCG
   Match= +5 , Mismatch= -1 , Gap= -2
   (b) Write a note on phylogenetic analysis. **08**

5. (a) Describe the protein structure prediction in detail. **10**
   (b) Explain protein classification database. **10**

6. Write short notes on any four: **20**
   i) EBI
   ii) SWISS PROT
   iii) ESTs
   iv) SNPs
   v) Ab initio modelling.

****