B. Sc. (Microbiology) (Sem. VI) Examination
March/April – 2015
MB-20 : Genomics, Proteomics & Bioinformatics

Time : Hours]
Instructions :
(1) Fill up strictly the details of signs on your answer book.
Name of the Examination :
B. SC. (MICROBIOLOGY) (SEM. VI)
Name of the Subject :
MB-20 : GENOMICS, PROTEOMICS & BIOINFORMATICS
Subject Code No. : 3 2 3 5 Section No. (1, 2,....) : Nil
(2) Figures to the right indicate full marks.
(3) Draw labeled diagram where necessary

1. Give specific answers: 12
   (1) What is annotation? How it's useful in genetic study?
   (2) Define: Sequence alignment. Name the methods use in it.
   (3) Define: a) databank b) database
   (4) What is Pi helix? State it significance in bioinformatics.
   (5) What is the aim of bioinformatics? Name any two research bioinformatics institute of India.
   (6) What is Distance matrix? Name any two.

2. Comment on/explain any two of the following: 12
   (1) Protein and proteomics are different.
   (2) Structure of gene can be predictable.
   (3) Statistician helps to study gene.
3 Attempt any two of the following:  
   (1) Describe in detail microbial genomics and its application.  
   (2) Give detail account on principle of bioinformatics and applications.  
   (3) Elaborate a note on proteomics. 

4 Write short notes on any two of the following:  
   (1) Pairwise sequence alignment and its significance.  
   (2) Protein: composition and databases  
   (3) Whole Genome Shotgun sequencing.