DM-M-2011125   Seat No. _____

M. Pharm. (Sem. II) (CBCS) Examination

April / May – 2015

Bioinformatics Theory

(Core-VI)

Time : **3 Hours**]   [Total Marks : **80**

Instructions : (1)   Answer and tie up both the sections separately.

(2)   Figures to the right indicate marks.

(3)   Answer any three (03) questions from each section

(4)   Question one (1) and questions five (5) are compulsory

(5)   Draw neat and clean diagrams as required

SECTION – I

1   Write notes on following : **(any seven)**   **7×2=14**

(A)   Operating system

(B)   e-Value

(C)   Query coverage

(D)   DBMS

(E)   Bioinformatics

(F)   NCBI

(G)   FASTA

(H)   DNAStar

(I)   SMART

(J)   Pfam

2   Write a detailed note on different types of BLAST.   **13**

3   Write a detailed note on GCG Wisconsin package of   **13**
     sequence analysis program.

4   Answer the following questions :
     (A) Difference between Linux and Unix system.   **7**
     (B) What do you mean by databases? Write a short   **6**
          note on different databases.

SECTION – II

5   Answer any two out of three.   **7×2=14**
     (a) Write a note on Pubmed and e-Journals.
     (b) Write a short note on Protein-Ligand Docking.
     (c) Enlist various funding agencies for scientific fundings,
          and give a brief guideline about applying for a research
          grant.

6   Enlist different alignment algorithms and discuss any one   **13**
     in detail.

7   Discuss in detail about submission of DNA sequences to   **13**
     database.

8   Answer the following questions :
     (a) Describe different types of protein structures and write **7**
          a note on secondary structure prediction.
     (b) Write a note on CLUSTAL W and CLUSTAL X for   **6**
          multiple sequence alignment.