# M. Sc. (Sem. II) (CBCS) Examination

April / May - 2017

## Biochemistry : IBC-2

### (Bioinformatics & Biostatistics : Concepts & Application)
### (Old Course)

**Faculty Code : 003**

**Subject Code : 012210**

Time : $2\frac{1}{2}$ Hours]    [Total Marks : **70**

Instructions : (1) All questions are compulsory.

(2) The right side figures indicate total marks of the question.

1    Answer the following : (any **seven**)    7×2=14

(1) Algorithms.

(2) Genome Project

(3) Genomics

(4) Global Alignment

(5) Hardware and Software

(6) Human Genome Project

(7) List out the secondary database of protein

(8) Literature database

(9) What is Normal Distribution? Give its properties.

(10) Difference between Sample and Population.

2    Answer the following : (any **two**)    7×2=14

(1) How Rasmol helping to visualize the 3D structure of protein?

(2) Contribution of Margaret Dayhoff in the field of Bioinformatics.

(3) Applications of Bioinformatics.

**3**    Answer the following :                  **7×2=14**

     (1)   Classification of Biological databases

     (2)   Sequence Alignment

<p style="text-align:center"><b>OR</b></p>

**3**    Answer the following :                  **7×2=14**

     (1)   Write short notes on MSA tools.

     (2)   Define mean, median and mode. Give examples for each.

**4**    Answer the following :

     (1)   Write short notes on 3D structure Visualization tools    **5**

     (2)   Write an essay on Protein Structure Database        **5**

     (3)   Data mining to Bioinformatics                      **4**

**5**    Answer the following : (any **two**)            **7×2=14**

     (1)   Write short notes on Phylogenetic analysis tools

     (2)   Secondary databases.

     (3)   Explain in detail: student's t-test.

     (4)   Write note on ANOVA.

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