BBCS-185

ASSIGNMENT BOOKLET

Bachelor's Degree Programme
B.Sc. Hons in Biochemistry (BSCBCH)

BIOINFORMATICS

Valid from January, 2024 to December, 2024

School of Sciences
Indira Gandhi National Open University
Maidan Garhi
New Delhi-110068.

Dear Student,

Please read the section on assignments in the Programme Guide for Core Courses that we sent you after your enrolment. A weightage of 30 per cent, as you are aware, has been earmarked for continuous evaluation, **which would consist of one tutor-marked assignment** for this course. The total marks of all the parts are 100, of which 35% are needed to pass it.

Instructions for Formatting Your Assignments

Before attempting the assignment please read the following instructions carefully:

1) On top of the first page of your answer sheet, please write the details exactly in the following format:

ROLL NO.: ……

NAME: ……

ADDRESS: ……

……

……

COURSE CODE: …….

COURSE TITLE: …….

ASSIGNMENT NO.: ……..…

STUDY CENTRE: ……..….. **DATE:** …….……...

PLEASE FOLLOW THE ABOVE FORMAT STRICTLY TO FACILITATE EVALUATION AND TO AVOID DELAY.

2) Use only foolscap size writing paper (but not of very thin variety) for writing your answers.

3) Leave 4 cm margin on the left, top and bottom of your answer sheet.

4) Your answers should be precise.

5) The assignment answer sheets are to be submitted to your Study Centre as per the schedule made by the study centre. **Answer sheets received after the due date shall not be accepted.**

   We strongly suggest that you retain a copy of your answer sheets.

6) This assignment is **valid from January 2024 to December, 2024** and submit it as per the instructions given in the Programme Guide.

7) **You cannot fill the exam form for this course** till you have submitted this assignment.

We wish you good luck.

ASSIGNMENT

BIOINFORMATICS

Course Code: BBCS-185
Assignment Code: BBCS-185/TMA/2024
Maximum Marks: 100

Answer **all the questions** given below.

1. Define the following terms: 2.5 x 4 = 10 M
   a) Genomic library b) Microarray c) Molecular docking d) Molecular dynamic simulation
2. Write a note on internet usage and describe important online bioinformatics resources. 10 M
3. Explain components of Microsoft office with suitable examples. 10 M
4. Describe the following: 5 x 2 = 10 M
   i. Search engines
   ii. Small Molecular Databases
5. Differentiate between the following: 5 x 2= 10 M
   i. Primary and Secondary databases
   ii. Similarity and Homology
6. Access ORF8 protein sequence from NCBI database in Genbank fromat write the title, ID, Organism name. 10 M
7. Describe how to download sequence XM_011959216.1 in GenBank and FASTA format. 10M
8. What is PDB format? Explain the use and importance of structure viewing tools? 10 M
9. Retrieve any four protein sequences from protein database, copy the sequences in FASTA file format, align the sequence each other and report the pair wise score using Clustal Omega10 M
10. Elaborate different types of Alignment types. 10 M