BACHELOR OF COMPUTER APPLICATIONS (BCA_NEW)

BCA_NEW ASSIGNMENT SEMESTER-2

ASSIGNMENTS

(January, 2025 & July, 2025 sessions)

FEG-02, MCS-202, MCS-203, MCSL-204, MCS-201, MCSL-205

SCHOOL OF COMPUTER AND INFORMATION SCIENCES , INDIRA GANDHI NATIONAL OPEN UNIVERSITY ,MAIDAN GARHI, NEW DELHI – 110 068

CONTENTS

Important Notes

1. Submit your assignments to the Coordinator of your Study Centre on or before the due date.
2. Assignment submission before due dates is compulsory to become eligible for appearing in corresponding Term End Examinations.
3. To become eligible for appearing in the Term End Practical Examination for the lab courses, it is essential to fulfill the minimum attendance requirements as well as submission of assignments (on or before the due date

Course Code	**:**	**MCSL-205**
Course Title	**:**	**C and PYTHON Lab.**
Assignment Number	**:**	**BCA_NEW(II)/L-205/Assignment/2025**
Maximum Marks	**:**	**100**
Weightage	**:**	**30%**
Last Date of Submission	**:**	**30th April,2025(For January Session)** **31st October, 2025 (For July session)**

There are two questions in this assignment carrying a total of 40 marks. Your Lab Record will carry 40 Marks. Rest 20 marks are for viva voce. You may use illustrations and diagrams to enhance the explanations. Please go through the guidelines regarding assignments given in the Programme Guide for the format of the presentation. Submit the screenshots along with the coding and documentation.

Section 1: C Programming Lab **(20 Marks)**

Question1: Using Structures write an interactive program in C language to create an application program for a small training company to maintain the Trainer's database. This application should have menu options like

- Creating a New Record
- Reading/Listing of Records
- Modify the record
- Delete the record

Each Trainer record should have Trainer Name, Trainer ID, Department Name, Salary, Position, Date of Joining, etc.). The application should be designed user-friendly.

Note: You must execute the program and submit the program logic, sample input, and output along with the necessary documentation for this question. Assumptions can be made wherever necessary.

Section 2: PYTHON Programming Lab

Question2: Attempt the following

I) Write a Program to perform the following tasks **(10 Marks)**

a. Create a database SELECTION_DB
b. Set connection with MySQL.connector.connect.
c. Create a table STUDENT_SELECTION in database SELECTION_DB with following data FIRST_NAME,LAST_NAME,AGE,GENDER, SCORE.
d. change table structure / (add, edit, remove column of a table) at run time

i. add a column address in the STUDENT_SELECTION table.
ii. execute SQL *INSERT* statement to create a record into STUDENT_SELECTION table
iii. run the query to updates all the records having GENDER as **'M'**, and increase AGE of all the males by one year.
iv. delete all the records from STUDENT_SELECTION Table where AGE is less than 18 .

II) Write a program in Python to print the cube of the numbers present in the list, by using map( ) function.

III) Write Python code to read a dataset (may be CSV file) and print all features i.e. columns of the dataset. Determine the descriptive statistics i.e. Maximum, Minimum Mean Median, Count, Variance, Standard Deviation, etc. of the numeric features like age, salary, etc., that may be present in the dataset. **(10 Marks)**

Note: You must execute the program and submit the program logic, sample input and output along with the necessary documentation for this question. Assumptions can be made wherever necessary.