Internal Assessment (Assignment)

Course Code: OMC103

Last Date of Submission: 26-Dec-2023

Course Title: Programming and Problem-Solving

Assignment Marks: 30

Assignment No.: 2

Note:

1. The assignment has two parts: **A** and **B**.

2. Part A has ten MCQs carrying one mark each. Answer **ALL** ten MCQs.

3. Part B has eight descriptive questions carrying four marks each. Attempt **any FIVE** questions out of eight.

Part A	(10 × 1 = 10 Marks)

Answer **all questions MCQ 1** to **MCQ 10**

MCQ No.	Question	Course Outcome
1	The size of a structure is---------	CO-1
Answer Choices:	a. 1 byte b. Total bytes of all structure members c. 4 bytes d. 2 bytes	
2	Structure in C Programming is-----	CO-1
Answer Choices:	a. Collection of elements of the same data type b. Collection of elements of the different data types c. Set of values d. Built-in data type	
3	The maximum number of dimensions in an array is----	CO-1
Answer Choices:	a. 1 b. 2 c. 3 d. No limit	
4	When an array is passed to a function, it is interpreted as ----	CO-1
Answer Choices:	a. Address of an array b. Address of First Element c. Values of First Element d. Number of elements in an array	
5	What is the value of the x in the following statement? `X = strcmp(string1, string2);`	CO-1
Answer Choices:	a. 1 b. False c. 0 d. String1	

6	`int a[5] = {1,2,3,4,5}`, what is the value of `a[7]`?	CO-1
Answer Keys:	a) 0 b) Garbage Value c) 5 d) 1	
7	The format specifier used for printing a string is -----	CO-2
Answer Keys:	a) %c b) %d c) %s d) %f	
8	If a file opening is failed, then fopen will return----	CO-1
Answer Keys:	a) null b) eof() c) Depends on Compiler d) zero	
9	The fastest loop in C programming is ------------------.	CO-1
Answer Keys:	a) while b) do-while c) for d) All the options	
10	What will be the output of the following program? ``` #include <stdio.h> int main(){ FILE *fp; char *str; fp=fopen("demo.txt","r");// demo.txt //:First Semester MCA while(fgets(str,6,fp)!=NULL) puts(str); fclose(fp); return 0; } ```	CO-1
Answer Key	a) `First Semester MCA` b) `First S` c) `First Semester` d) `First Se`	

Part B   **(5 × 4 = 20 Marks)**

Attempt **ANY FIVE** questions from Q 1 to Q 8.

Q No.	Question	Course Outcome
1	Explain the purpose of structures and compare structures with unions.	CO-1
2	Illustrate different file-handling modes using a suitable C program.	CO-1
3	Design and develop a C program to read a text and count the number of alphabets, spaces, and digits.	CO-1
4	Write a C program to add two complex numbers using structures. Use a concept of structures for multiple records of complex numbers.	CO-1
5	What is an array? Explain the declaration and initialization of single- and	CO-1

	two-dimension arrays.		
6	Write the advantages and drawbacks of recursion. Write a c-program using the recursive function for Binary to Decimal Conversion.	CO-1
7	Write a c-program using structures to read, write, compute average - marks and display the students scoring above and below the average marks for a class of N students	CO-1
8	Explain the following file function with example: i) fopen( ) (ii) fclose( ) (iii) feof( ) (iv) fseek( )	CO-1

Course Outcomes:

CO-1. Describe the fundamental concepts of computational thinking and problem-solving strategies. [L-1]

CO-2. Demonstrate the use of arrays, strings, structures, and unions in the 'C' programming language. [L-3]

CO-3. Demonstrate the use of re-useable code using functions in 'C'. [L-3]

CO-4. Describe and implement file handling mechanism in 'C' programs. [L-3]