

CENTER FOR DISTANCE AND ONLINE EDUCATION



**INTEGRAL
UNIVERSITY**



LUCKNOW

ASSIGNMENT-JULY 2024

SUB. NAME: - PROGRAMMING IN C

MCA – 101: Online Mode

- Q-1.** Define object-oriented programming and explain the features of object-oriented programming. How is it different from procedure-oriented programming?
- Q-2.** Discuss the importance of header files in C programming. Provide examples of commonly used header files.
- Q-3.** Discuss function overloading in C. How is it achieved, and what are its limitations?
- Q-4.** Answer the following questions: -
- A.** What would be the output of the following program:
- ```
main()
{
int C[] = {21,22,23,24,25,26};
int i;
for(i = 0; i<4;i++)
printf("\n%d",*(C+i)); }
```
- B.** Find the value of \*x, \*(x+4) and \*(x+7) for the following declaration:
- ```
char *x = "I AM A STUDENT" ;
```
- C.** Prepare a flowchart and algorithms for factorial of a number?
- Q-5.** Describe the concept of Recursion in C programming. Provide examples of recursive functions and discuss their advantages and limitations.
- Q-6.** Write a C program to check whether a given character is vowel or not, using switch-case control structure.
- Q-7.** Describe the process of file handling in C. What are the different modes of file opening?
- Q-8.** Write a C program that uses a structure to store and display student information (name, roll number, and marks).
- Q-9.** Explain the concept of dynamic memory allocation. Discuss malloc, calloc, and free with examples.
- Q-10.** Explain the following:
- | | |
|------------------------------|--------------------------------|
| a) Compiler vs. interpreter | b) Structure vs. union |
| c) Dynamic memory allocation | d) Call by value and reference |