BCA (2019 Batch)   (Sem.–1)

PROBLEM SOLVING USING C

Subject Code : UGCA-1903
M.Code : 76963
Date of Examination : 14-01-2023

Time : 3 Hrs.   **Max. Marks : 60**

INSTRUCTIONS TO CANDIDATES :
1. **SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.**
2. **SECTION-B contains SIX questions carrying TEN marks each and students have to attempt any FOUR questions.**

SECTION-A

1. **Write briefly :**

    a) What do you mean by function prototype? How it is defined?

    b) Compare local and global variables with example.

    c) Explain the conditional operator with example.

    d) Discuss structure of a C program.

    e) What are header files? Why these are required? Give example.

    f) What is the relationship between formal arguments and actual arguments?

    g) What is a pointer? How a pointer variable is declared, initialized and accessed?

    h) What are identifiers and keywords? Give example.

    i) What is a constant? How it is declared and used?

    j) Define Array? How 1-D and 2-D arrays are declared? Give example.

SECTION-B

2. a) Explain various data types of C with example. Give memory requirement of each.

   b) Define recursion. Write a recursive function to compute factorial of a given number.

3. a) Explain if-else, nested-if and switch statements of C with examples.

   b) Compare call by value and call by reference parameter passing with examples.

4. a) Draw a flow chart to print largest of 3 numbers.

   b) What are constants and variables? Discuss the rules how constants and variables are defined. Give examples.

5. a) Define string. Explain various operations which can be applied on strings with examples.

   b) What are two-dimensional arrays? How these are declared? Write a program to add two matrices.

6. a) What are pointers arrays? How you can declare and access 1-D and 2-D array elements using pointers? Discuss with examples.

   b) Write a program using pointers to find largest element of the array.

7. a) Write a program to design a structure for 30 students of a class with Roll No, Name and Marks. Find the average marks of the class.

   b) Explain various file operations available in C with examples.

NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.