B.Sc.(CS) (Sem.–1)
PROBLEM SOLVING AND PROGRAMMING IN C
Subject Code : BCS-106
M.Code : 70883
Date of Examination : 17-01-2023

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

INSTRUCTION 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 a student has to attempt any FOUR questions.**

SECTION-A

1) **Answer briefly :**

a) How can the getchar and putchar function be used to read and write multi character strings?

b) What are multi dimensional arrays? How these are declared and accessed?

c) How you can declare a structure variable? Give example.

d) What is the relationship between formal arguments and actual arguments? How they can be declared within a function?

e) What is the use of Goto statement?

f) What are library functions? How they are used?

g) What are static variables? How these are declared?

h) What do you mean by nested structures? Give example?

i) What do you mean by recursion? Give example.

j) Distinguish between while and do-while control statements.

SECTION- B

2. Explain various types of operators of C with suitable examples.

3. a) What is a string? Write a program to enter a line of text and count how many vowels are there?

   b) Explain the Nested if, Switch and For statements of C with example.

4. What are pre-processor directives? What is their purpose? How can you use them? Explain with examples.

5. Write a program using pointers to find the largest and smallest elements of a one dimensional array.

6. a) Explain basic data types of C language with suitable examples. Discuss the memory requirement and range of each data type.

   b) Distinguish between structure and union.

7. a) Differentiate between call by value and call by reference with examples.

   b) What are automatic and external storage classes? How these variables are declared and accessed?

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.