U.G. 1st Semester Examination - 2021
COMPUTER SCIENCE
[HONOURS]
Generic Elective Course (GE)
Course Code : COM.SC-H-GE-L-101
(Computer Fundamentals and
Programming Using C)

Full Marks : 40   Time : $2\frac{1}{2}$ Hours

The figures in the right-hand margin indicate marks.

Candidates are required to give their answers in their own words as far as practicable.

GROUP-A

1. Answer any **five** questions: 2×5=10

    a)   What is the role of header file in C program?

    b)   Differentiate between constant and variable.

    c)   Differentiate between structure and union.

    d)   How are pointers declared and initialized?

    e)   What do you mean by scope of a variable?

    f)   What is the difference between call by value and call by reference?

    g)   What is recursive function?

[Turn over]

GROUP-B

2. Answer any **two** questions: 5×2=10

    a)   What is an operator in C? Explain the arithmetic, relational, logical, and assignment operators in C.   1+4

    b)   Explain the different types of loop in C with syntax and appropriate example.   5

    c)   Explain different storage classes in C briefly. 5

    d)   Explain array of structures and structure within a structure with examples.   2+3

GROUP-C

Answer any **two** questions: 10×2=20

3. a)   What do you mean by recursion? Write a C program to find factorial of a positive integer using recursion.

    b)   Describe the use of array with an appropriate example.   2+5+3

4. a)   Write and explain the different dynamic memory allocation functions in C.

    b)   What are the differences between binary and text file? Mention different file opening modes in C.   5+(3+2)

5. a) Write a program in C to find the area and perimeter of a circle.

   b) Write a program in C to sort the elements of a given one-dimensional integer array.   5+5

6. Write short notes on any **two** of the following:

                                   5×2=10

   a) Switch statement

   b) String

   c) Macros in C

   d) Function declaration and function definition

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