

B.Tech. Computer Science Engineering / Electronics and Telecommunication Engineering /  
Instrumentation Engineering (NEP Pattern) Semester-II  
**STESC204 - Programming for Problem Solving**

P. Pages : 1

Time : Two Hours



**GUG/S/25/16798**

Max. Marks : 40

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- Notes :
1. All questions are compulsory.
  2. All questions carry equal marks.
  3. Assume suitable data wherever necessary.
  4. Illustrate your answers wherever necessary with the help of neat sketches.

1. a) Explain the structure of a C program with an example. 7  
b) Describe the role of keywords, data types, and constants in C programming. 6

**OR**

2. a) Discuss the history and salient features of the C programming language. 7  
b) Write a C program to calculate the simple interest given principal, rate, and time. 6
3. a) Write a C program to find the largest of three numbers using if -else-if ladder. 7  
b) Write a program to print the multiplication table of a number entered by the user using for loop. 6

**OR**

4. a) Explain the syntax and use of while, do-while, and for loops with examples. 7  
b) Write a C program to display whether a character entered is a vowel or consonant using switch case. 6
5. a) Write a program to input and print the elements of a 2 x 2 matrix using a two-dimensional array. 7  
b) Write a recursive C function to calculate the factorial of a given number. 7

**OR**

6. a) Define a user-defined function. Write a program using a function to find the maximum of three numbers (using call by value) 7  
b) Write a C program to store 10 integers in an array and print only even numbers using a function. 7

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