

3011

B.Tech. (CSE) 2nd Semester (G-Scheme)
Examination, July-2022
PROGRAMMING FOR PROBLEM SOLVING
Paper- ESC-CSE-101-G

Time allowed : 3 hours] [Maximum marks : 75

Note : Attempt any five questions in all. All questions carry equal marks.

1. (a) What are storage class in C language? $6 \times 2.5 = 15$
(b) Discuss strings in C language with examples.
(c) Explain "Built-in" functions with example.
(d) Discuss call by reference mechanism in C.
(e) Differentiate between getch() and getche() functions with example.
(f) Explain preprocessor directives in C with examples.
2. (a) What is flow-chart? Draw a flow-chart to find the largest of three numbers. 8
(b) Define algorithm. Write an algorithm to calculate simple interest of an amount. 7

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3011

3. Write short note on : 3×5=15
- (a) Header files
 - (b) Data types
 - (c) Syntax and Logical errors
4. (a) What are conditional statements? Explain nested if statement using suitable examples. 8
- (b) Write a program to find the sum of digits of a number. 7
5. (a) What do you understand by loops? Discuss “for loop”, its syntax with examples. 8
- (b) Write a program to find the factorial of a number using iterative statement. 7
6. (a) Define function. Differentiate between ‘Call by Value’ and ‘Call by Reference’ usage of a function using suitable examples 7
- (b) Write a program to find sum of first 20 natural numbers. 8
7. (a) Define recursive function. Differentiate direct and indirect recursion with suitable examples. 8
- (b) Write a program to find the Fibonacci series using recursive function. 7

3011

(3)

3011

8. Briefly explain following with examples- 3×5=15
- (a) Pointers
 - (b) Calloc and malloc
 - (c) File Handling in C
9. (a) What is the difference between Union and Structure in C? Explain with suitable example. 8
- (b) Write a program to swap two values using pointer. 7

3011