

B.Tech. (CSE) 2nd Semester, G-Scheme

Examination, May-2023

PROGRAMMING FOR PROBLEM SOLVING

Paper - ESC-CSE-101-G

Time allowed : 3 hours]

[Maximum marks : 75

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

1. (a) What are object and executable code in C language?
- (b) Discuss array in C language with examples.
- (c) Explain "Break" statement with example.
- (d) Discuss "call by value" mechanism in C.
- (e) Differentiate between getch() and getche() functions with example.
- (f) Explain keyword and identifiers in C with examples.

6×2.5=15

2. Write short note on:

3×5=15

- (a) Preprocessor directives
- (b) Data types
- (c) Logical Operators

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3. (a) What is flow-chart? Draw a flow-chart to find the largest of three numbers. 8
(b) Define algorithm. Write an algorithm to convert temperature in degree from Fahrenheit to Celsius. 7
4. (a) What do you understand by loops? Discuss "while-do" loop, its syntax with examples. 8
(b) Write a program to find the sum of first 20 natural number using iterative statement. 7
5. (a) What are conditional statements? How *nested if* statement is useful in programming? Justify using suitable Examples. 8
(b) Write a program to find the sum of digits of a number. 7
6. (a) Define 'Array'. How multidimensional array is declared, initialized and updated? Explain using suitable Examples. 8
(b) Write a program to find the location of an element in an array. 7

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7. (a) Define recursive function. Write a program to find the Fibonacci series using recursive function. 8
(b) Write a program to reverse a string without using string function. 7
8. (a) How Union is different from Structure in C? Explain with suitable example. 8
(b) Write a program to swap two values using pointer.
9. Briefly explain following with examples: $3 \times 5 = 1$
 - (a) Pointers
 - (b) Dynamic memory allocation
 - (c) File Handling in C

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