

2022
B.A./B.Sc.
First Semester
 CORE – 1
COMPUTER SCIENCE
Course Code: CSC 1.11
 (Programming Fundamentals Using C)

Total Mark: 70

Pass Mark: 28

Time: 3 hours

Answer five questions, taking one from each unit.

UNIT-I

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| 1. | (a) Explain the scope of variables in C. | 6 |
| | (b) Explain the various I/O character functions. | 3 |
| | (c) Explain the different sections in a typical C program. | 5 |
| 2. | (a) Write down characteristics of procedural programming. | 3 |
| | (b) Explain any three string functions with example. | 6 |
| | (c) Explain relational operators in C. | 5 |

UNIT-II

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| 3. | (a) Write down the precedence of arithmetic operators. | 5 |
| | (b) Write a program that computes the factorial of a number. | 4 |
| | (c) Write a program that uses switch-case to compute different arithmetic operations. | 5 |
| 4. | (a) Write down the difference between while and do-while loops. | 2 |
| | (b) Explain the break and continue statements. | 5 |
| | (c) Write a program that determines the largest of three numbers. | 4 |
| | (d) Write a C++ program that evaluates the following arithmetic expression: $a^3 + b^3 + c^3$ | 3 |

UNIT-III

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| 5. | (a) Write a program to compute the sum of two matrices using arrays. | 5 |
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- (b) Explain call by reference method of calling a function. 5
- (c) What is an array? Explain the different types of array. 1+3=4
6. (a) Write a program to count the number of positive, negative and zero values in an array. 5
- (b) Explain call by value method of calling a function. 5
- (c) Write a program that returns a pointer value from a user-defined function. 4

UNIT-IV

7. (a) Write down differences between structure and union. 6
- (b) Explain the typedef keyword in structures. 4
- (c) Explain the working of structures data type in C. 4
8. (a) Explain enumerated datatype in C. 4
- (b) Write a program that creates a structure and accesses the members using the structure pointer. 5
- (c) Explain array of structures in C. 5

UNIT-V

9. (a) Explain file handling in C. 5
- (b) What is a pointer variable? Explain the use of pointers in C. 1+3=4
- (c) Explain calloc() function. 5
10. (a) Explain the different arithmetic operations on pointer. 3
- (b) Write down the differences between static and dynamic memory allocation. 6
- (c) Explain the malloc() function. 5