

Question Paper

Exam Date & Time: 27-Dec-2022 (09:30 AM - 12:30 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

INTERNATIONAL CENTRE FOR APPLIED SCIENCES END SEMESTER THEORY EXAMINATION - DECEMBER 2022 I SEMESTER B.Sc.(Applied Sciences) in Engg.

PROBLEM SOLVING USING COMPUTERS [ICS 111 - S2]

Marks: 50

Duration: 180 mins.

A

Answer all the questions.

- 1) Differentiate between Compiler and Interpreter. (Three points). (2.5)
 - A)
 - B) Draw a flowchart to find all kinds of roots of a quadratic equation. (5)
 - C) Short note on: Pointers (2.5)
- 2) What are the differences between call by value and call by reference? [difference points should include: prototype, formal parameter, actual parameter, and example code] (5)
 - A)
 - B) Write a complete C++ program to multiply two matrices. (5)
- 3) Differentiate between break and continue with the help of an example code snippet, and its output explanation. (2)
 - A)
 - B) Write a complete function-oriented C++ program for Bubble Sort. Define Bubble_Sort() function, call the function in the main(), and display the sorted 1D array in the main(). (6)
 - C) Define default argument function CalculateSI() with rate_of_interest as a default argument. [main() function need not to be defined] (2)
- 4) Illustrate Binary Search on data list {15, 22, 30, 51, 60,70,75} to search element: 30 . Show all the steps clearly (5)
 - A)
 - B) Write a complete C++ program to find whether a given string is a palindrome or a non-palindrome. (3)
 - C) Give the output: (2)
 - i) int a, b, c, d;
 - a=5; b=8;
 - c=a&b; d=a|b;
 - cout<< c<< d;