[Total No. of Questions: 09]   [Total No. of Pages 02]

University Roll No ....   **MORNING**

1 0 MAY 2023

Program: B.Tech (Batch 2018 onwards)

Semester: 1ˢᵗ

Name of the Subject: Programming for Problem Solving

Subject Code: ESC-104

Paper ID: 15935

Scientific calculator is not allowed

Time Allowed: 03 Hours   **Max Marks: 60**

NOTE:

1) Part A & B are compulsory.
2) Part-C has TWO questions Q8 and Q9. Both are compulsory but with internal choice.
3) Any missing data may be assumed appropriately

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Part-A   **[Marks: 02 each]**
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Q1.   Write short notes on:

   a)   What is an Algorithm? Give example.

   b)   Define pointers? Give example.

   c)   What is a complier? What is its use?

   d)   Define data types. What are their categories?

   e)   What is the need and importance of operating system?

   f)   Write the syntax of for loop.

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Part-B   **[Marks: 04 each]**
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Q2.   Define Flowchart. Draw flow chart to find the largest of three numbers.

Q3.   Draw a neat Block diagram of computer system and explain its components.

Q4.   What are operators? Name the categories. Give example of each.

Q5.   Differentiate between while & do-while loop.

Q6.   Define array. Explain 1-D and 2-D array with example.

Q7.   Write short notes on the following:

   a) break statement.

   b) continue statement.

Part-C   [Marks: 02 each]

Q8.   Write a program to find the sum of two matrices(2-D arrays).

Or

Write a program to sort a given array [21, 17, 13, 32, 27, 11, 24, 19] in ascending order.

Q9.   Define Functions. Explain different types of functions available in C language. What are the different methods through which parameters are passed to a function? Write example program of each.

Or

Define Recursion. Write a program to find out factorial of given number using recursion.

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