Sr. No...007103

December 2023

B.Tech. (EL/CSE(AIML)/CIVIL/ENV/FAE) - 1 SEMESTER

Programming for Problem solving (ESC-103)

Max. Marks:75

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Instructions:

- 1. It is compulsory to answer all the questions (1.5 marks each) of Part -A in short.
- 2. Answer any four questions from Part -B in detail.
- 3. Different sub-parts of a question are to be attempted adjacent to each other.

PART-A

(1.5)Q1 (a) What is a compiler? (b) What are the features of a good algorithm? (1.5)(c) Explain the difference between break and continue statement. (1.5)(d) Differentiate between RAM and ROM. (1.5)(e) Explain the idea of structures in brief. (1.5)(f) What is a header file? (1.5)(g) What do you mean by time complexity? (1.5)(h) What are strings? How are they different from arrays? (1.5)(i) Differentiate between local and global variables. (1.5)(j) What are unary operators?

PART-B

- Q2 (a) Draw a flowchart to find the largest of three numbers. Also write the algorithm (10)
 - (b) What is operating system? Write some important functions of an operating (5)
- Q3 (a) Write a program to find the grades of a student using switch-case.
 - (b) What is recursion? Write a program to print the Fibonacci series up to nth (10) term using recursion.
- Differentiate between arrays and structures. Write a program to store the (15) information of students using structures.
- Q5 (a) Explain the steps for sorting the given array using bubble sort:

5, 7, 10, 2, 13, 9, 18, 15

- (b) Explain the concept of call by reference and call by value using an example of (10) swapping two variables.
- 06 (a) What are 2-D arrays? Write a program to calculate the sum of two matrices.

