

Please check that this question paper contains 9 questions and 1 printed pages within first ten minutes.

[Total No. of Questions: 09]

[Total No. of Pages: 1]

Uni. Roll No. ....

Program: B.Tech

Semester: 1/ (2018)

Name of Subject: Programming for Problem Solving

Subject Code: ESC-104

Paper ID: 15935

25-02-2022(M)

**Time Allowed: 02 Hours**

**Max. Marks: 60**

**NOTE:**

- 1) Each question is of 10 marks.
- 2) Attempt any six questions out of nine
- 3) Any missing data may be assumed appropriately

- Q1.** Create an algorithm, Flow chart / Pseudo-code to swap a number without using third variable.
- Q2.** a) Write a program using all Arithmetic expressions in switch case.  
b) Which operator have the highest rank from the given expression.  
Solve  $4 * 5 - 4 / 2 + 32 / 2$  with its precedence.
- Q3.** How arrays are different from structure. Give example of both arrays and structure.
- Q4.** Discuss the implementation of bubble sort and insertion sort with pseudo-code.
- Q5.** Compare call by value and call by reference with code.
- Q6.** Write a code and draw a flow chart to find the roots of a quadratic equation.
- Q7.** a) Write a code to display the address of a variable using pointer.  
b) Write a code to add two numbers by using pointer.
- Q8.** Write a code to display "Hello world" in a file using file handling. Discuss all the file handling operations.
- Q9.** Discuss all the components of a computer system and functions of an operating system.

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