

MORNING

19 DEC 2019

Please check that this question paper contains 09 questions and 02 printed pages within first ten minutes.

[Total No. of Questions: 09]

[Total No. of Pages: 02]

Uni. Roll No.

Program: B.Tech (Batch 2018 onward)

Semester: 1/2

Name of Subject: Programming for Problem Solving

Subject Code: ESC-104

Paper ID: 15935

Time Allowed: 03 Hours

Max. Marks: 60

NOTE:

- 1) Parts A and 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

Part – A

[Marks: 02 each]

Q1.

- a) Define algorithm. Write down the steps to solve logical and numerical problem.
- b) List the different data types available in C language.
- c) What is string? Briefly explain the string handling functions.
- d) Differentiate between array and structure.
- e) Draw a flowchart to calculate the average of three numbers.
- f) Write down the code to check whether a number is even or odd.

Part – B

[Marks: 04 each]

- Q2.** Draw a block diagram to illustrate the components of computer system.
- Q3.** Discuss with the help of diagram the complete process of compilation of C program from source code to executable code.
- Q4.** Explain break and continue statements in C with the help of example.
- Q5.** Write a program to make a simple calculator performing operations addition, subtraction, multiplication and division using switch statement.
- Q6.** Write down a program to print Fibonacci series using recursion.
- Q7.** What is the use of pointer in C? Write a program to print the address of a variable using pointer.

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Part – C

[Marks: 12 each]

Q8. Write a program to find the multiplication of two matrices in C.

OR

Differentiate between sorting and searching. Explain the different searching algorithms by taking suitable examples.

Q9. What is the need of function in C? Write down the program to swap the values of two variables using call by value and call by reference.

OR

Define structure. Create a structure "Employee" having EmpID, Name, Salary and Age as its members. Illustrate it with the help of array of structure.
