FACULTY OF ENGINEERING

BE I-Semester (AICTE) (Main & Backlog) Examination, Dec. 2019 / Jan. 2020

Subject: Programming for Problem Solving

Time: 3 Hours   **Max. Marks: 70**

Note: Answer all questions from Part A and any five questions from Part B

PART – A (2 x 10 = 20 Marks)

1) What are the steps to solve logical and numerical problems?

2) Describe Flowchart/Pseudo code with example.

3) What would be the output for the given program?

```
Int main()
{
    Int i = 5
    For (j, i<1, 1--)
    Printf ("%d"; i);
    Return 0;
}
```

4) Why conditional branching is required? What is the syntax of conditional branching statement.

5) Write a program for finding roots of equations.

6) Differentiate between functions and recursive functions.

7) Write the syntax and example of Union variable.

8) Write a program for student information using structure (fields are stname, str no. St add)

9) What is wrong with the following code segment?

```
Int * a;
*a = 40;
```

10) Write short notes on File Handling Operation.

PART – B (50 Marks)

11. a) Write a algorithm to check whether the given number is even or odd. (5)

    b) Write a program to pring prime from numbers one. (5)

12. a) Define compiler? What are the components of computer system explain in detail. (5)

    b) Write a program to print the digits in reverse order. (5)

13. a) Describe strings and string types with an Example. (5)

    b) Write a program to find the addition of two matrices. (5)

14. a) What is call by value and call by reference? (6)

    b) Can main() be called recursively? (4)

....2

15. a) What are file modes? Write a program to copy one existing file. (8)

   b) What is EOF? When is EOF used? (2)

16. a) Write a recursive program for string palindrome. (8)

   b) What is the return type of print()? (2)

17. a) Why do string subscripts ends with null character? (2)

   b) Create a structure containing 6 fields? Address1, name city, State, ID and Zip. Create a type call record (using pointer structure) (8)

****