

Code No: 152AF

**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD****B.Tech I Year II Semester Examinations, August - 2019****PROGRAMMING FOR PROBLEM SOLVING****(Common to EEE, CSE, IT)****Time: 3 hours****Max. Marks: 75****Note:** This question paper contains two parts A and B.

Part A is compulsory which carries 25 marks. Answer all questions in Part A.

Part B consists of 5 Units. Answer any one full question from each unit. Each question carries 10 marks and may have a, b, c as sub questions.

**PART - A****(25 Marks)**

- 1.a) Find and remove the error in the following C Statement.  $a > b ? g = a : g = b;$  [2]
- b) How to declare string without specifying length? [2]
- c) Write about ftell function. [2]
- d) List the limitations of recursive functions. [2]
- e) How do you find the time complexity of a bubble sort? [2]
- f) Give a note on iteration statements in C language. [3]
- g) What is enumerated data type and write syntax and example. [3]
- h) How to handle errors with file functions? Explain [3]
- i) Discuss about allocating and freeing memory. [3]
- j) What is sorting and what is the importance of sorting? [3]

**PART – B****(50 Marks)**

- 2.a) Define variable. List the rules for declaring variable. Give valid and invalid examples.
  - b) Write an algorithm to find HCF of two positive integer numbers. [5+5]
- OR**
- 3.a) Explain the terms stdin, stdout and stderr.
  - b) List and explain the different types of storage class. [5+5]
4. Discuss any five string handling functions in detail. [10]
- OR**
- 5.a) Explain multidimensional arrays and give an example program to pass array as argument in functions.
  - b) How to pass the structures to functions as an argument? Explain. [5+5]
- 6.a) Write a program in C that copies the contents of one file to another file.
  - b) How to use fseek() for randomly access the file content? Explain [5+5]
- OR**
7. Briefly explain the pre-processor directives in detail. [10]
  8. List and explain the some C standard functions and libraries. [10]
- OR**
9. Explain with examples how arrays are passed as arguments in functions. [10]
  - 10.a) Explain the algorithm for finding roots of a quadratic equation.
  - b) Write a program to sort array of integers using selection sort. [5+5]
- OR**
11. Define algorithm and write algorithm to generate prime number series between m and n, where m and n are integers. [10]