

R18

Code No:151AC

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY, HYDERABAD

B.Tech I Year I Semester Examinations, December – 2018

PROGRAMMING FOR PROBLEM SOLVING

(Common to CE, ME, ECE, EIE, MCT, MMT, AE, MIE, PTM)

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) What is a flowchart? Explain with one example. [2]
- b) Discuss about Strlen() function with an example. [2]
- c) Explain fseek() function with example. [2]
- d) Explain about the parameter passing using copy by address. [2]
- e) Write an algorithm to find the given number is prime or not. [2]
- f) C is a structured programming language? Justify. [3]
- g) How pointer can be used for accessing multi dimensional arrays? Discuss. [3]
- h) Name few preprocessor directives. [3]
- i) Write Recursive function for towers of honoi. [3]
- j) Find out no. of comparisons to sort {2,1,7,4,8,6}. [3]

PART - B

(50 Marks)

- 2.a) Describe the various control structures available in 'C'. [5+5]
 - b) Write a program to find whether the given no is am strong or not. [5+5]
- OR**
- 3.a) Explain about different bit-wise operators with examples. [5+5]
 - b) What are command line arguments? Explain with a complete 'C' program. [5+5]
- 4.a) Explain about Enumerated data types with an example. [5+5]
 - b) Consider the array declaration: float a[5]; and the memory address of a[0] is 4056. What is the memory address of a[2]? [5+5]
- OR**
- 5.a) What is a structure? Explain how to declare, initialize and access the structure elements. [5+5]
 - b) Write a program to find the string length by using string function. [5+5]

- 6.a) What is a file pointer? Explain the steps for sequential file operations. [5+5]
b) Compare *gets()* and *fgets()* with an example. [5+5]

OR

- 7.a) Write a program to copy the contents of one file to another file. [5+5]
b) List and define the preprocessor statements in C. [5+5]

- 8.a) What is a function prototype? Give an example. [5+5]
b) Explain about different parameter passing mechanisms with examples. [5+5]

OR

- 9.a) Define Recursion. Write a recursive function for swapping of two numbers. [5+5]
b) Write a program for printing Fibonacci series by using Recursive function. [5+5]

- 10.a) Apply linear search on {22,11,66,44,99,55,88}. [5+5]
b) Apply bubble sort on the above given data. [5+5]

OR

- 11.a) What do you mean by sorting? Mention the different types of sorting. [5+5]
b) Explain quick sort in detail on {24,12,11,76,39,12,67,34,88,91,26,45,78}. [5+5]

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12-12-2018PM