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'.
  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.
  b)   What are command line arguments? Explain with a complete 'C' program.   [5+5]

4.a)   Explain about Enumerated data types with an example.
  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.
  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.
 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.
 b) List and define the preprocessor statements in C.   [5+5]

8.a) What is a function prototype? Give an example.
 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.
 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}.
  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.
  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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