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Roll No ....

MEDC-201

M.E./M.Tech., II Semester

Examination, December 2017

System Programming

Time : Three Hours

Maximum Marks : 70

Note: i) Attempt any five questions.
ii) All questions carry equal marks.
iii) Assume data/value if required.

1. a) How recursion is differ from iteration? Write a fibonancci series program for both.
   b) Explain types of data structure operation in brief.

2. a) How to create pointers? Explain pointers manipulation with suitable example.
   b) Write a program to find simple interest using function.

3. a) Write a C program function to insert the node at beginning and ending into singly link list.
   b) What do you mean by polish notation? Explain with suitable example.

4. a) Explain AVL tree with an example.
   b) How insertion and deletion operation can be performed in queue. Explain with diagram.

5. a) Write a C code for binary search and find the item 32 into the given list using binary search.
   25, 32, 65, 80, 96, 122, 135, 150

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   b) Sort the following numbers using insertion sort.
   46, 25, 35, 49, 10, 92, 83, 32

6. a) Find M matrix and S matrix of matrix chain multiplication whose sequence of dimensions is {5, 10, 3, 12, 6}
   b) Explain divide and conquer technique with suitable example.

7. a) Explain traversal operation on binary tree.
   b) Write basic step of push/pop operation of stack with suitable diagram.

8. Write short note on:
   a) Interpreter
   b) Operating System
   c) Assembler

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