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Roll No .....

**MEMT-302(B)**  
**M.E./M.Tech. III Semester Examination, December 2017**  
**System Programming**  
**(Elective - II)**  
**Time : Three Hours**

**Maximum Marks : 70**

**Note:** i) Attempt any five questions.  
ii) All questions carry equal marks.

1. a) Discuss about the steps in problem solving with digital computer algorithms.  
b) Discuss about control constructs like conditionals, iterations, conditional repetitions and recursion.
2. a) Discuss about data types and data representation.  
b) Discuss about data structure array - various operations with arrays.
3. a) Discuss about pointers for data structures and functions.  
b) Discuss about static and dynamic allocations.
4. a) Discuss about various operations like searching appending and insertion.  
b) Discuss about Doubly linked lists and their implementation.
5. a) Discuss about Queues and various operations on Queues.  
b) Discuss about the operation and applications of different trees.
6. a) Discuss about Binary and Hash search technique.  
b) Explain about insertion sort and bubble sort. <http://www.rgpvonline.com>
7. Give an overview of Assemblers, Interpreters compilers and Editors.
8. Write short notes on any two of the following:
  - a) Pointers for data structures
  - b) Stacks and its applications
  - c) Quick sort and Heap sort

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