

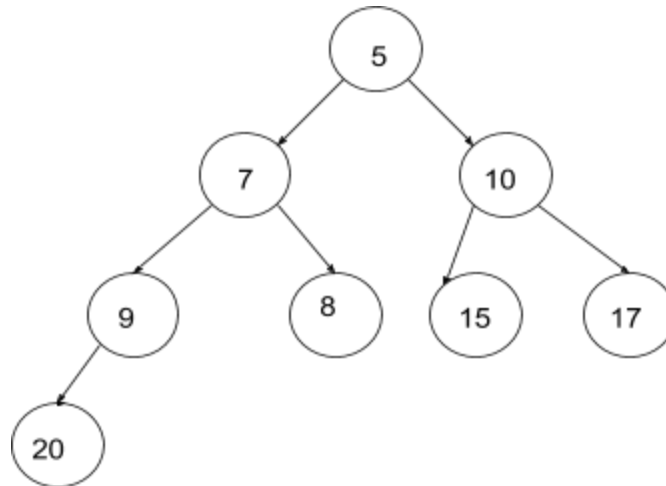
**CSE 221: Algorithms**  
**Worksheet 2**  
**Heap and Sorting**

Name:

ID:

**Question 1:**

- a) The following tree is Min Heap Ordered. Explain why.



- b) Insert 6 in the above heap ordered tree. Show each step and the final min heap tree.

**Question 2:**

- a) Build a Max heap from the following array. Show both tree and array in each step.

5	20	7	8	15	17	10
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- b) Remove the root node from the heap tree in 2(a). Explain the algorithm and show the tree in each step.

**Question 3:** Sort the following using HeapSort. It is already a heap, so ignore the build heap step. Show both array and tree in each step.

20	17	15	8	10	7	5
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