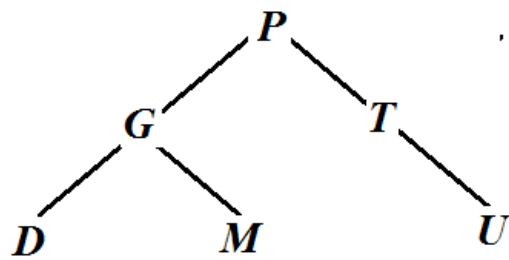
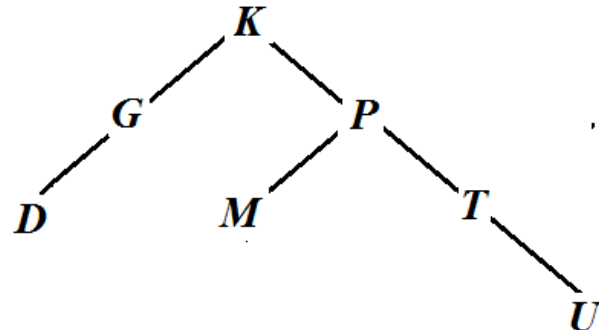


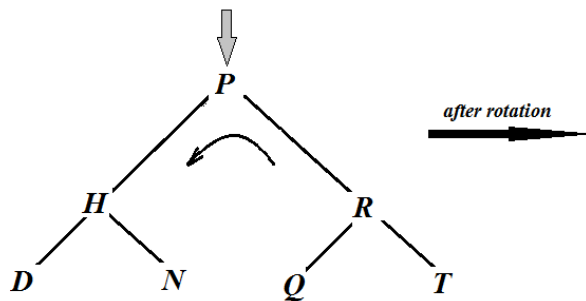
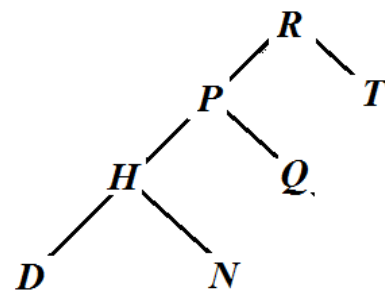
KEY TO QUIZ #10

[6 points]

1. [3 points] Show graphically every step when inserting an item with a key value 'K' at the root of the following binary search tree:

The answer:

2. [3 points] (a) Show how to perform left rotation at the node with the key value *P*:

The answer:

- (b) Mark changes that have been made during this operation. (Note that some nodes did not go through any changes.)

The following links of the node have been changed →	Link to the parent	Link to the left child	Link to the right child
Key value D	<i>No</i>	<i>No</i>	<i>No</i>
Key value N	<i>No</i>	<i>No</i>	<i>No</i>
Key value P	<i>Yes</i>	<i>No</i>	<i>Yes</i>
Key value T	<i>No</i>	<i>No</i>	<i>No</i>
Key value H	<i>No</i>	<i>No</i>	<i>No</i>
Key value R	<i>Yes</i>	<i>Yes</i>	<i>No</i>
Key value Q	<i>Yes</i>	<i>No</i>	<i>No</i>