


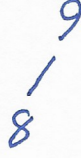
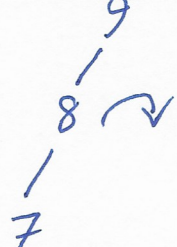

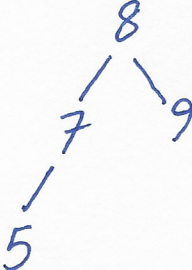
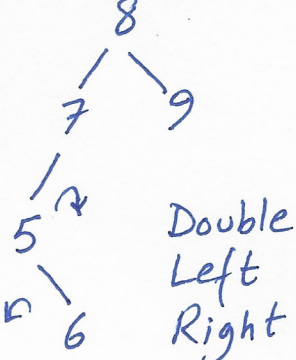
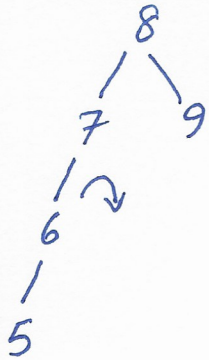
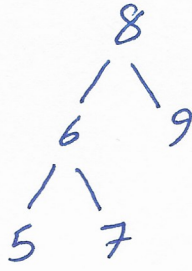
SOLUTION

ICS-202 Data Structures, Quiz 03, Section _____ [V2], First Semester 2021-22

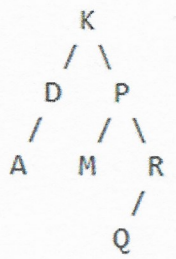
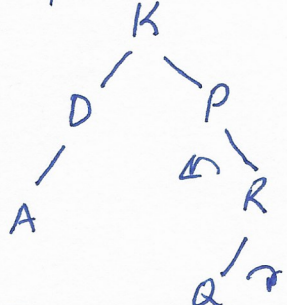
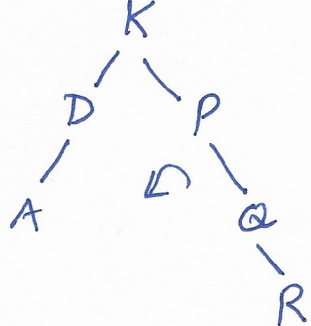
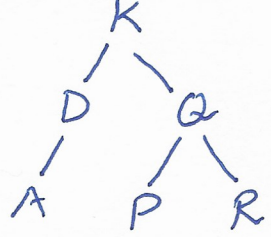
Name: _____, ID: _____

Q. 1 [7 marks] Insert the following integers in an initially empty AVL tree in this order: 9, 8, 7, 5, 6

Balance the tree after each insertion. Show all rotation(s) done.

<p>Step 1 [if needed]</p> 	<p>Step 2 [if needed]</p> 	<p>Step 3 [if needed]</p>  <p>Single Right Rotation</p>	<p>Step 4 [if needed]</p> 
<p>Step 5 [if needed]</p> 	<p>Step 6 [if needed]</p>  <p>Double Left Right Rotation</p>	<p>Step 7 [if needed]</p> 	<p>Step 8 [if needed]</p>  <p><u>Final Answer</u></p>

Q. 2 [3 marks] Given the following AVL tree, balance the tree after deleting 'M'. Show the rotation(s).

<p>Initially,</p> 	<p>Step 1 [if needed]</p> <p>After deletion,</p> 	<p>Step 2 [if needed]</p> 	<p>Step 3 [if needed]</p>  <p><u>Final Answer</u></p>
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Double Right Left Rotation,