

## 6.034 QUIZ 2

November 18, 2002

<b>Name</b>	
<b>E-mail</b>	

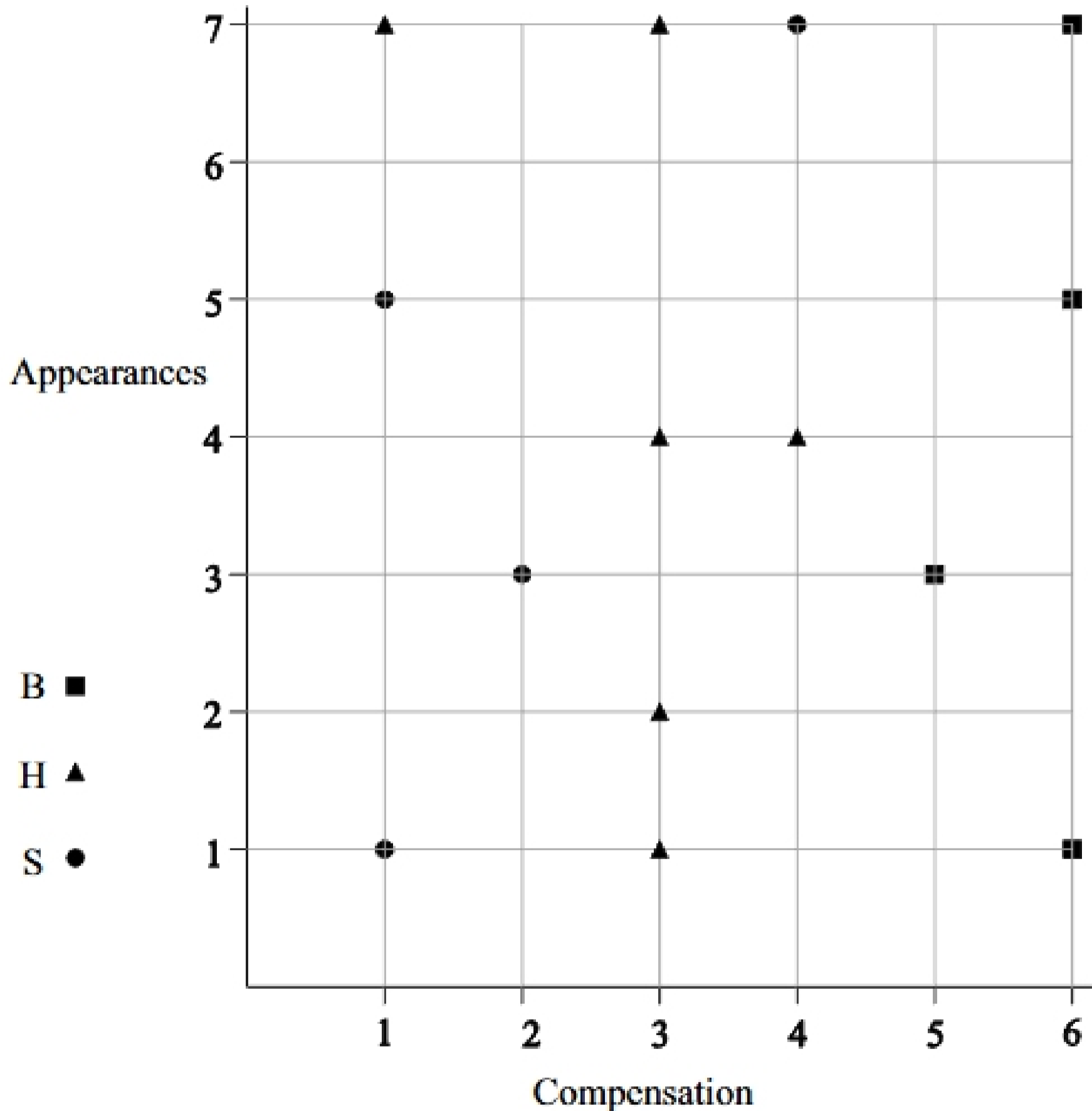
**Indicate TA:**

<b>Jake Beal</b>	
<b>Stephen Larson</b>	
<b>Hope Lestier</b>	
<b>Justin Schmidt</b>	
<b>Arian Shahdadi</b>	
<b>Ozlem Uzuner</b>	

<b>Problem Number</b>	<b>Maximum</b>	<b>Score</b>
<b>Problem 1</b>	<b>35</b>	
<b>Problem 2</b>	<b>35</b>	
<b>Problem 3</b>	<b>16</b>	
<b>Problem 4</b>	<b>14</b>	
<b>Total</b>	<b>100</b>	

### Problem 1: Identification Trees (35 points)

You have been hired by a wealthy Sloan graduate to manage his stock portfolio. He informs you that he likes to measure stocks by the compensation ( $K$ ) paid to the company CEO and the number of times the company name has appeared ( $A$ ) on the front page of the Wall Street Journal during the past month. Then he hands you the following graph, on which he has provided labeled samples for three categories, Buy, Hold, and Sell (B, H, and S).



**Part A: Partitioning Data (7 points)**

You decide to create an identification tree using the training samples. Draw the partitions produced using the training samples on the graph. You should be able to do this without detailed computations. There may or may not be more than one correct answer.

**Part B: Tree Construction (8 points)**

Draw the identification tree. Include specifications for all tests and the number and type of the samples that end up at each leaf.

