

**INSTRUCTIONS:** Answer the following questions. Write legibly, take a high quality scan of your responses, compile all pages into one pdf, and upload only one pdf document to Canvas by **11:59pm (PDT), Sunday, June 7.**

**QUESTION 1**

(1): the current interest rate on the one-year bond is 5%. If the 1-yr interest rates over the next four years are expected to be 6%, 7%, 8%, and 9%. Find out the interest rate on a 2-yr bond, a 3-yr bond, a 4-yr bond, and a 5-yr bond. Also draw the yield curve.



(2): if  $i_t$  increases from 5% to 6%. Assume people expect interest rate on a 1-yr bond at time  $t + 1$  increases from 6% to 7%, and interest rate on a 1-yr bond at time  $t + 2$  increases from 7% to 8%, but do no adjust expectations further. Find out the interest rate on a 2-yr bond, a 3-yr bond, a 4-yr bond, a 5-yr bond, and draw the yield curve



(3): Assume people expect interest rate on a 1-yr bond at time  $t + 1$  decreases from 6% to 4%, and interest rate on a 1-yr bond at time  $t + 2$  increases from 7% to 3%, and interest rate on a 1-yr bond at time  $t + 3$  and  $t + 4$  are back to 2%. Find out the interest rate on a 2-yr bond, a 3-yr bond, a 4-yr bond, a 5-yr bond, and draw the yield curve.



(4): the current 1-yr interest rate is 5%, and 1-yr interest rates over the next four years are expected to be 6%, 7%, 8%, and 9%. Assume liquidity premiums for 2- to 5-yr bonds are 0.25%, 0.5%, 0.75%, and 1.0%, respectively. Find out the interest rate on a 2-yr bond, a 3-yr bond, a 4-yr bond, a 5-yr bond, and draw the yield curve

