

Name: \_\_\_\_\_ Key: Version 100 \_\_\_\_\_

Due: \_\_\_\_\_ 0 \_\_\_\_\_

Write your answers in the boxes below each question. On separate paper, neatly show your work for each question. No credit will be awarded if you provide an answer but show no work. When completed, use the Adobe Scan app to take a picture and save as a single PDF file with this as the first page. Save the file as V# where the # is your version number from the top right of this page. Example: "V101.pdf" if you have Version 101. Upload to [josephfarizo.com/assignments.html](http://josephfarizo.com/assignments.html). Correct answers are important, only minimal partial credit is awarded.

**Question 1** What is (a) the asked yield (that is, the yield to maturity) on a \$1200 par value, 20-year Treasury Bond with 15 years left until maturity? In the WSJ, the quote shows BID= 99.76, ASK = 99.92, and COUPON = 2.14%. (b) What is the dollar amount the dealer makes, or the 'bid-ask spread', from trading this bond?

**(a) = 2.1463%, (b) = \$1.92**

**Question 2** What is the value of a share of General Dynamics if they have just paid a \$5 dividend, you expect these dividends to grow indefinitely at 4%, and the required return on the stock is 13.9%?

**\$52.53**

**Question 3** What is the number you would see in the 'ASK' column in the WSJ's Treasury quotes if you see a bond with an asked yield (that is, the yield to maturity) = 1.39342%, the bond has a \$1900 par value, 30-year term, and 18 years left until maturity? The COUPON = 1.59%.

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**Question 4** What is the YTM of a IQVIA Holdings Inc corporate bond with: face value = \$8000, coupon rate = 7%, years to maturity = 25, price = \$8817? What is its current yield? Is this a premium or discount bond? This bond pays semiannual coupons at the end of each period.

**YTM = 6.1917%, CY = 6.3514%, premium**

**Question 5** A eBay Inc corporate bond has a face value of \$5000, coupon rate of 7%, and 25 years to maturity. Semiannual coupons are paid at the end of each period. What is an investor's YTM if the investor buys the bond for (a) \$5000? What if they pay (b) \$4200, or (c)\$6200?

(a) = 7%, (b) 8.562%, (c) 5.2629%

**Question 6** A stock returned 8% over a period when inflation was 4.9%. A bond returned 4.6% over a period when inflation was 2.8%. What was the (a) stock's and (b) bond's real rate of return over their respective periods? Round to three decimals places (i.e., 1.987%) and use the Fisher equation.

Stock = 2.955% Bond = 1.751%

**Question 7** What is the YTM of a Emerson Electric Company corporate bond with: face value = \$5000, coupon rate = 5%, years to maturity = 25, price = \$5877? What is its current yield? Is this a premium or discount bond? This bond pays semiannual coupons at the end of each period.

YTM = 3.8958%, CY = 4.2539%, premium

**Question 8** You expect a stock's year-end dividends over the next 3 years to be \$2, \$3, and \$5. At the time the last of your forecasted dividends is paid, you expect the shares will be trading at \$157. What is the value of a share? Assume the required rate of return on these shares is 16%.

$V_0 = \$107.74$

**Question 9** What is the price of a Huntington Ingalls Industries corporate bond with: face value = \$2000, coupon rate = 5%, years to maturity = 30, discount rate = 10%? What is its current yield assuming it sells for this price? Is this a premium or discount bond? Assume semiannual coupons at the end of each period.

Price = \$1053.54, CY = 9.4918%, discount

Rate this problem set from 1 to 5, with 1 being "very easy" and 5 being "very difficult." (circle one)

1      2      3      4      5

About how many minutes did you spend on this problem set? (circle one)

<45      45      60      75      >75