Name …….. ID ……

FN 211
Quiz 3 –Stock and Bond Valuation

1.		6.	
2.		7.	
3.		8.	
4.		9.	
5.		10.	

1. You buy a house for $38,000. You agree to a 60 month loan with a monthly interest rate of 0.55%. What is your required monthly payment?
   A. $634.24
   B. $745.29
   C. $605.54

2. Which of the following is an underlying assumption of the constant growth dividend discount model (DDM)?
   A. Dividends have a constant growth rate
   B. The constant growth rate of dividends will continue for an infinite time period
   C. A and B are both correct.

Use the following information to answer question 3. and 4.
Davenport Corporation's last dividend was $2.70 and the directors expect to maintain the historic 3 percent annual rate of growth. You plan to purchase the stock today because you feel that the growth rate will increase to 5 percent for the next three years and the stock will then reach $25 per share.

3. How much should you be willing to pay for the stock if you require a 17 percent return?

   A. $16.97
   B. $22.16
   C. $21.32

$$P = \frac{2.7(1.05)}{1.17} + \frac{2.7(1.05)^2}{(1.17)^2} + \frac{2.7(1.05)^3}{(1.17)^3} + \frac{25.00}{(1.17)^3} = \$22.16$$

4. How much should you be willing to pay for the stock if you feel that the 5 percent growth rate can be maintained indefinitely and you require a 17 percent return?

   A. $19.28

B. $21.32
C. $23.63

P = (2.70 × 1.05) ÷ (0.17 – 0.05) = $23.63

5. A stock selling at $50 has a P/E multiple of 20 on the basis of the current year's earnings. An analyst estimates that next's earnings per share will be 10% higher and that the stock should be valued on a forward looking basis at the industry average P/E of 18. Based on the analyst's assessment, it is most likely that the stock is currently:

A. overvalued.
B. fairly valued.
C. undervalued.

The stock is currently overvalued by $0.50 as its intrinsic value is $49.50 compared to the price of $50: Next year's EPS = ($50 / 20) x 1.10 = $2.75; Intrinsic value = $2.75 x 18 = $49.50.

6. Which of the following bonds would be the most sensitive to changes in market interest rates?
A. 4% coupon bond with a 2 year maturity
B. 8% coupon bond with a 10 year maturity
C. 4% coupon bond with a 10 year maturity

7. An 8 year corporate bond pays has a 7% coupon rate and par of $1,000. What should be the bond's price if the required return is 6% and the bond pays interest semiannually?
A. $1,062.81
B. $1,053.45
C. $1,049.49

N = 16, I = 3, PMT = 35, FV = 1000

8. An 8 year annual payment 7% coupon Treasury bond has a price of $1,075 and par of $1,000. The bond's YTM must be
A. 5.80%
B. 7.00%
C. 1.69%

N=8, PV = -1075, PMT = 70, FV = 1000

9. An annual payment bond with a $1,000 par has a 5% quoted coupon rate, a 6% promised ytm and 6 years to maturity. What is the bond's Macaulay Duration?
A. 5.31 years
B. 4.76 years
C. 4.16 years

Name …….. ID ……

Macaulay Duration: Annual-pay coupon

Period	Cash Flow	PV of CF	t x PV
1	50.0	47.17	47.17
2	50.0	44.50	89.00
3	50.0	41.98	125.94
4	50.0	39.60	158.42
5	50.0	37.36	186.81
6	1,050.0	740.21	4,441.25
		950.83	5,048.60

Duration	5.3097	years

10. The Modified Duration for a 10-year, 12% semi-annual pay coupon bond with a yield to maturity of 10 percent and a Macaulay duration of 7.2 years is *closest to*:

A. 6.55 years
B. 6.79 years
C. 6.86 years

$D_{mod} = 7.2/(1 + 0.10/2) = 7.2/1.05 = 6.86$ years