

FN 211

Quiz 3 – Loan Calculation and Stock Valuation

1.	B	6.	C
2.	A	7. (x2)	C
3.	B or C	8. (x2)	A
4.	C		
5.	B		

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. You buy a brand new Mercedes Benz C-class for 2,800,000 Baht. Your father will pay for a down payment of 400,000 Baht and you agree to a 60 month loan for the remaining amount with an interest rate of 2.5% per year. Your required monthly payment is *closest to*:

- A. 45,000 Baht**
- B. 46,667 Baht
- C. 42,594 Baht

3. An investor wants to determine the intrinsic value of the common stock for a company with the following characteristics:

- The firm maintains a constant dividend payout ratio
- Goodwill and patents account for 40% of the firm's assets
- The firm's revenues and earnings are highly correlated with the business cycle

Further, the investor focuses on the firm's capacity to pay dividends rather than expected dividends. Considering the above, the investor will most likely use which of the following valuation models?

- A. Asset-based valuation model.
- B. Free-cash-flow-to-equity model.**
- C. Gordon dividend growth model.**

4. 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 5. and 6.

Name ID

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.

5. 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

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

6. 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**

$$P = (2.70 \times 1.05) \div (0.17 - 0.05) = \$23.63$$

7. Micro Corp. just paid dividends of \$2 per share. Assume that over the next three years dividends will grow as follows, 5% next year, 15% in year two, and 25% in year 3. After that growth is expected to level off to a constant growth rate of 10% per year. The required rate of return is 15%. Calculate the intrinsic value using the multistage model.

- A. \$5.56
- B. \$66.4
- C. **\$49.31**

$$\begin{aligned} \text{price} &= \frac{2(1.05)}{1.15} + \frac{2(1.05)(1.15)}{1.15^2} + \frac{2(1.05)(1.15)(1.25)}{1.15^3} + \frac{2(1.05)(1.15)(1.25)(1.1)}{.15 - .1} \\ &= \$49.31 \end{aligned}$$

8. 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.