FIN350 In Class Work No. 3

The midterm 3 will consist of about 10 questions from chapter 9 & 5, about 6 questions from chapter 10, and about 4 questions from chapter 8. The following equations will be reproduced on the test.

\[
\begin{align*}
\text{WACC} &= w_{\text{drd}}(1-T) + w_{\text{prp}} + wc_{\text{rs}} \\
\text{rp} &= D / P \\
\text{rs} &= D_1 / P_0 + g \\
\text{Rd} \text{ (before tax): YTM} \\
\text{Firm value} &= \text{FCF1}/(\text{WACC} - g)
\end{align*}
\]

1. The PDQ Company’s common stock is expected to pay a $3.00 dividend in the coming year. If investors require a 10% return and the growth rate in dividends is expected to be 5%, what will the market price of the stock be?
   a. $20.00 
   b. $40.00 
   c. $30.00 
   d. **$60.00**

2. If a firm will produce the following constant growth free cashflows: FCF1=$10m at end of year 1, FCF2=$9m at the end of year 2, and so on with the growth rate \( g = -10\% \) (negative 10%). If the weighted average cost of capital for the whole firm is 10% and the market value of debt is $20 m and there are 1m shares of common stock outstanding, how much is the per share stock value?
   a. $20.00 
   b. **$30.00** 
   c. -$100.00 
   d. $60.00 
   e. -$80

3. You have discovered from looking at charts of past stock prices that if you buy just after a stock price has increased for five consecutive days, you make money every time! This is clearly a violation of ________ market efficiency. For another example, suppose that firms with unexpectedly high earnings earn abnormally high returns for several months after the announcement. This is clearly a violation of ________ market efficiency.

A) strong form; semi-strong form

B) semi-weak form; weak form
C) semi-strong form; strong form
D) strong form; weak form

E) weak form; semi-strong form

4. You purchase a stock expecting the price to rise 10% in the coming year. After one year, the stock has actually increased in value by 30%, due primarily to new information released during the year concerning unexpectedly higher sales. Which of the following describes this result?
A) This is a violation of weak form efficiency.
B) This is a violation of semi-strong form efficiency.
C) This is a violation of strong form efficiency.
D) This is a violation of all forms of market efficiency.
E) This is not a violation of market efficiency.

5. According the information below (see next page), what is the dividend yield of GAP?

a. 19.25
b. 0.5%
c. 0.09
d. 15%
e. 5%

Stock Market Reporting

<table>
<thead>
<tr>
<th>52 WEEKS</th>
<th>YLD</th>
<th>VOL</th>
<th>NET</th>
</tr>
</thead>
<tbody>
<tr>
<td>HI</td>
<td>LO</td>
<td>STOCKSYM</td>
<td>DIV</td>
</tr>
<tr>
<td>52.75</td>
<td>19.06</td>
<td>Gap Inc GPS</td>
<td>0.09</td>
</tr>
</tbody>
</table>

Gap has been as high as $52.75 in the last year.
Gap has been as low as $19.06 in the last year.
Gap pays a dividend of 9 cents/share.
Given the current price, the dividend yield is ½ %.

Gap ended trading at $19.25, down $1.75 from yesterday’s close.
Given the current price, the PE ratio is 15 times earnings.
6,517,200 shares traded hands in the last day’s trading.

by Donglin Li
6. According to the dividend discount model, the current value of a stock is equal to the:
   A) present value of all expected future dividends.
   B) sum of all future expected dividends.
   C) next expected dividend, discounted to the present.
   D) discounted value of all dividends growing at a constant rate.
   E) none of the above

7. The stock valuation model that determines the current stock price as the next dividend divided by the (discount rate less the dividend growth rate) is called the:
   A) Zero growth model.
   B) Dividend growth model.
   C) Capital Asset Pricing Model.
   D) Earnings capitalization model.

8. A company has preferred stock outstanding which pays a dividend of $6 per share a year. The current stock price is $75 per share. The yield to maturity on firms’ long term bond is 8.5%. What is the cost of preferred stock?
   A) 6%
   B) 7.5%
   C) 10%
   D) 8.5%
   E) 8%

9. The stock of MTY Golf World currently sells for $90 per share. The firm has a constant dividend growth rate of 6% and just paid a dividend of $5.09. If the required rate of return is 12%, what will the stock sell for one year from now?
   A) $ 90.00
   B) $ 93.52
   C) $ 95.40
   D) $ 99.80

10. The price of a stock will likely decrease if:
   A) the investment horizon increases.
   B) the growth rate of dividends decreases.
   C) the discount rate decreases.
   D) dividends are discounted back to the present.

11. If a stock’s P/E ratio is 14 at a time when earnings are $3 per year, what is the stock’s current price?
   A) $4.50
   B) $18.00
   C) $32.22
   D) $42.00
   E) None of the above
12. Which of the following statements is most correct?

a. The stock valuation model, \( P_0 = \frac{D_1}{k_s - g} \), can be used for firms which have negative growth rates.
b. If a stock has a required rate of return \( k_s = 12 \) percent, and its dividend grows at a constant rate of 5 percent, this implies that the stock’s dividend yield is 5 percent.
c. The price of a stock is the present value of all expected future dividends, discounted at the dividend growth rate.
d. Statements a and c are correct.
e. All of the statements above are correct.

13. A firm sold a 10-year bond issue 2 years ago. The bond has an 8% annual coupon and a $1,000 face value. If the current market price of the bond is $1000 and the tax rate is 35%, what is the firm’s after tax cost of debt? (Remaining bond life is 8 years)

A) 4.19%  
B) 5.20%  
C) 6.45%  
D) 6.50%  
E) 4.78%

14. For a multi-product firm, if a new project's beta is different from that of the overall firm, then the

A) project should be discounted at a rate commensurate with its own beta  
B) project should be discounted using the overall firm's beta.  
C) project should be discounted at the Treasury-bill rate.  
D) project should be discounted at 7%.

15. Given the following: the risk-free rate is 5% and the market risk premium is 5%, which projects should be accepted?

<table>
<thead>
<tr>
<th>Project</th>
<th>Beta</th>
<th>Expected return</th>
</tr>
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<tbody>
<tr>
<td>I</td>
<td>0.65</td>
<td>12%</td>
</tr>
<tr>
<td>II</td>
<td>0.90</td>
<td>17%</td>
</tr>
<tr>
<td>III</td>
<td>1.40</td>
<td>19%</td>
</tr>
</tbody>
</table>

A) I only  
B) II only  
C) III only  
D) I and II and III  
E) None of the projects are acceptable
16. The market value of equity is $500 million and the total market value of the firm is $925 million. The cost of equity is 15%, the cost of debt is 10%, and the tax rate is 35%. What is the firm’s WACC?
A) 11.09%  
B) 12.18%  
C) 13.78%  
D) 14.17%  
E) 15.64%

17. A common stock issue is currently selling for $50 per share. You expect the next dividend to be $1.5 per share. If the firm has a dividend growth rate of 10% that is expected to remain constant indefinitely, what is the firm's cost of equity?
A) 5%  
B) 10%  
C) 13%  
D) 20%  
E) 15%

18. If a firm uses the same company cost of capital for evaluating all projects with very different risks, which of the following is likely?
A. Rejecting good low risk projects  
B. Accepting poor high risk projects  
C. Both A and B  
D. Neither A nor B

19. Which of the following is/are true of the Capital Asset Pricing Model?
A) Its graph is referred to as the Charisma Line  
B) It usually uses the T-bill rate as the risk-free rate  
C) It uses beta as a measure of market risk  
D) all of the above  
E) Only B and C above

20. Which of the following statements is correct?

a. lower beta stocks have a higher required return.  
b. Two securities with the same stand-alone risk must have same betas.  
c. Company-specific risk can be diversified away.  
d. The market risk premium is not affected by investors’ attitudes about risk.  
e. All above statements are correct.
21. If you hold a $1.3 million portfolio made up of the following stocks:

<table>
<thead>
<tr>
<th>Market value</th>
<th>Beta</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stock A</td>
<td>.2 million</td>
</tr>
<tr>
<td>B</td>
<td>.5 million</td>
</tr>
<tr>
<td>C</td>
<td>.6 million</td>
</tr>
</tbody>
</table>

What is the beta of the portfolio?
A) 1.17  
B) 1.14  
C) 1.38  
D) 1.06  
E) cannot be determined from the information given

22. Magee Company's stock has a beta of 1.20, the risk-free rate is 4.50%, and the market risk premium is 5.00%. What is Magee's required return?

a. 10.25%  
b. 10.50%  
c. 10.75%  
d. 11.00%  
e. 11.25%

23. Inflation, recession, and high interest rates are economic events that are characterized as

a. Company-specific risk that can be diversified away.  
b. Market risk.  
c. Systematic risk that can be diversified away.  
d. Diversifiable risk.  
e. Unsysteematic risk that can be diversified away.