## PRACTICE QUIZ

1. One way often used to insure that management decisions are in the best interest of the stockholders is to
a) Threaten to fire managers who are seen as not performing adequately.
b) Remove management's perquisites.
c) Tie management compensation to the performance of the company's common stock price.
d) Tie management compensation to the level of earnings per share.
2. In comparing an ordinary annuity and an annuity due, which of the following is true:
a) the future value of an annuity due is always greater than the future value of an otherwise identical ordinary annuity.
b) the future value of an ordinary annuity is always greater than the future value of an otherwise identical annuity due.
c) the future value of an annuity due is always less than the future value of an otherwise identical ordinary annuity, since one less payment is received with an annuity due.
d) all things being equal one would prefer to receive an ordinary annuity compared to an annuity due.
3. The future value of a dollar $\qquad$ as the interest rate increases and $\qquad$ the farther in the future an initial deposit is to be received.
a) decreases; decreases
b) decreases; increases
c) increases; increases
d) increases; decreases
4. What is the rate of return on an investment of $\$ 124,090$ if the company expects to receive $\$ 10,000$ per year for the next 30 years?
a) 7 percent
b) 4 percent
c) 1 percent
d) 0 percent
5. The $\qquad$ is a statistical measure of the relationship between series of numbers.
a) coefficient of variation
b) standard deviation
c) correlation
d) probability
6. The goal of an efficient portfolio is to
a) maximize risk for a given level of return.
b) maximize risk in order to maximize profit.
c) minimize profit in order to minimize risk.
d) minimize risk for a given level of return.
7. Perfectly $\qquad$ correlated series move exactly together and have a correlation coefficient of
$\qquad$ , while perfectly $\qquad$ correlated series move exactly in opposite directions and have a correlation coefficient of $\qquad$ .
a) negatively; 1; positively; +1
b) negatively; +1 ; positively; 1
c) positively; 1; negatively; +1
d) positively; +1; negatively; 1
8. Sopp Accounting Services has an outstanding issue of 1,000 shares preferred stock with a $\$ 100$ par value, an 8 percent annual dividend, and 5,000 shares of common stock outstanding. If the stock is cumulative and the board of directors has passed the preferred dividend for the last two years, how much must preferred stockholders be paid prior to paying dividends to common stockholders?
9. On December 31, 1998, the Bradshaw Corporation had $\$ 485,000$ as an ending balance for its retained earnings account. During 1999, the corporation declared a $\$ 3.50 /$ share dividend to its stockholders. The Bradshaw Corporation has 35,000 shares of common stock outstanding. When the books were closed for 1999 year end, the corporation had a final retained earnings balance of $\$ 565,000$. What was the net profit earned by Bradshaw Corporation during 1999?
10. In an effort to analyze Clockwork Company finances, Jim realized that he was missing the company's net profits after taxes for the current year. Find the company's net profits after taxes using the following information.
Return on total assets $=2 \%$
Total Asset Turnover $=0.5$
Cost of Goods Sold = \$105,000
Gross Profit Margin $=0.30$
11. Ken borrows $\$ 15,000$ from a bank at 10 percent annually compounded interest to be repaid in six equal installments. Calculate the interest paid in the second year.
12. Suzy wants to buy a house but does not want to get a loan. The average price of her dream house is $\$ 500,000$ and its price is growing at 5 percent per year. How much should Suzy invest in a project at the end of each year for the next 5 years in order to accumulate enough money to buy her dream house with cash at the end of the fifth year. Assume the project pays 12 percent rate of return.
13. Mr. \& Mrs. Pribel wish to purchase a boat in 8 years when they retire. They are planning to purchase the boat using proceeds from the sale of their property which is currently worth $\$ 90,000$ and its value is growing at 7 percent a year. The boat is currently worth $\$ 200,000$ increasing at 5 percent per year. In addition to the value of their property, how much additional money should they deposit at the end of each year in an account paying 9 percent annual interest in order to be able to buy the boat upon retirement?
14. Russo has a portfolio of three assets. Find the expected rate of return for the portfolio assuming he invests 50 percent of its money in asset $A$ with 10 percent rate of return, 30 percent in asset $B$ with a rate of return of 20 percent, and the rest in asset $C$ with 30 percent rate of return.
15. Russo's Gas Distributor, Inc. wants to determine the required return on a stock portfolio with a beta coefficient of 0.5 . Assuming the risk free rate of 6 percent and the market return of 12 percent, compute the required rate of return.
16. International Tools Inc. (ITI) has estimated the market value of its assets to be $\$ 1,250,000$. What is the value of ITI's common stock if it has $\$ 900,000$ in liabilities, $\$ 50,000$ in preferred stock, and 7,500 shares of common stock outstanding?
17. A firm's common stock currently sells for $\$ 75$ per share. The firm has total assets of $\$ 1,000,000$ and total liabilities, including preferred stock, of $\$ 350,000$. If the firm has 10,000 shares of common stock outstanding,
a. what is the book value of each share of common stock?
b. is the stock overvalued or undervalued in the marketplace?
c. what might be the reason(s) for your answer in $b$.
18. The cost to a corporation of each type of capital is dependent upon
a) the risk free rate of bonds plus the business risk of the firm.
b) the risk free rate of each type of capital plus the business risk of the firm.
c) the risk free rate of each type of capital plus the financial risk of the firm.
d) the risk free rate of each type of capital plus the business risk and the financial risk of the firm.
19. The specific cost of each source of long term financing is based on $\qquad$ and $\qquad$ costs.
a) before tax; historical
b) after tax; historical
c) before tax; book value
d) after tax; current
20. In order to recognize the interrelationship between financing and investments, the firm should use $\qquad$ when evaluating an investment.
a) the least costly source of financing
b) the most costly source of financing
c) the weighted average cost of all financing sources
d) the current opportunity cost
21. A corporation is considering a capital project for the coming year.

The project has an internal rate of return of 14 percent. If the firm has the following target capital structure and costs, what should their decision be and why?
Source of Capital Proportion After tax cost

| Long term debt | .40 | $10 \%$ |
| :--- | :--- | :--- |
| Preferred stock | .10 | $15 \%$ |
| Common stock equity | .50 | $20 \%$ |

22. With the existence of fixed operating costs, a decrease in sales will result in $\qquad$ in EBIT.
a) a proportional increase
b) an equal increase
c) a less than proportional decrease
d) a more than proportional decrease
23. An increase in fixed operating costs will result in $\qquad$ in the degree of operating leverage.
a) a decrease
b) an increase
c) no change
d) an undetermined change
24. A firm has fixed operating costs of $\$ 650,000$, a sales price per unit of $\$ 20$, and a variable cost per unit of $\$ 13$. At a base sales level of 500,000 units, the firm's degree of operating leverage is
$\qquad$ -.
a) 1.07
b) 1.11
c) 1.18
d) 1.23
25. The Majestic Blind Co. sells its finished product for an average of $\$ 35$ per unit with a variable cost per unit of $\$ 21$. The company has fixed operating costs of $\$ 1,050,000$.
a. Calculate the firm's operating breakeven point in units.
b. Calculate the firm's operating breakeven point in dollars.
c. Using 100,000 units as a base, what is the firm's degree of operating leverage?
26. Frankline Coin, Inc. is considering two capital structures. The key information follows. Assume a 40 percent tax rate and expected EBIT of $\$ 50,000$.

Source of Capital
Long-term debt Common stock

Structure 1
\$500,000 @ 8\%
10,000 shares

## Structure 2

\$350,000 @ 7\%
20,000 shares
a. Calculate two EBIT-EPS coordinates for each of the structures.
b. Indicate over what EBIT range, if any, each structure is preferred.
27. Mr. R. owns 20,000 shares of $A B C$ Corporation stock. The company is planning to issue a stock dividend. Before the dividend Mr. R. owned 10 percent of the outstanding stock, which had a market value of $\$ 200,000$, or $\$ 10$ per share. Upon receiving the 10 percent stock dividend the value of his shares is
a) $\$ 220,000$.
b) $\$ 210,000$.
c) $\$ 200,000$.
d) greater, but cannot be determined.
28. A $\qquad$ has an effect on the firm's share price similar to that of a $\qquad$ .
a) stock repurchase; stock split
b) stock dividend; stock split
c) cash dividend; stock dividend
d) cash dividend; stock split
29. The purpose of a stock split is to
a) affect the firm's capital structure.
b) decrease the dividend.
c) enhance the trading activity of the stock by lowering the market price.
d) increase the market price of the stock.
30. A firm has had the indicated earnings per share over the last three years:

| Year | EPS |
| :--- | ---: |
| $\overline{1999}$ | $\$ 3.00$ |
| 1998 | 2.00 |
| 1997 | 1.00 |

a. If the firm's dividend policy was based on a constant payout ratio of 50 percent, determine the annual dividend for each year.
b. If the firm's dividend policy was based on a fixed dollar payout policy of 50 cents per share plus an extra dividend equal to 75 percent of earnings per share above $\$ 1.00$, determine the annual dividend for each year.
31. Brian borrows $\$ 5,000$ from a bank at 8 percent annually compounded interest to be repaid in five annual installments. Calculate the principal paid in the third year.
32. Champion Breweries must choose between two asset purchases. The annual rate of return and related probabilities given below summarize the firm's analysis.

Asset A

| Rate of Return | Probability |  |  |
| :--- | :---: | :---: | :---: |
|  |  | Rate of Return | Probability |
|  | $30 \%$ | $5 \%$ |  |
| $10 \%$ | 40 | 15 | $40 \%$ |
| 15 | 30 | 25 | 20 |
| 20 |  | 40 |  |

For each asset, compute
a. the expected rate of return.
b. the standard deviation of the expected return.
c. the coefficient of variation of the return.
d. Which asset should Champion select?
33. A firm has determined its optimal capital structure, which is composed of the following sources and target market value proportions:

| Source of capital | Target market <br> Proportions |
| :--- | :---: |
| Long term debt | $30 \%$ |
| Preferred stock | 5 |
| Common stock equity | 65 |

DEBT: The firm can sell a 20 year, $\$ 1,000$ par value, 9 percent bond for $\$ 980$. A flotation cost of 2 percent of the face value would be required in addition to the discount of \$20.
PREFERRED STOCK: The firm has determined it can issue preferred stock at $\$ 65$ per share par value. The stock will pay an $\$ 8.00$ annual dividend. The cost of issuing and selling the stock is \$3 per share.
COMMON STOCK: The firm's common stock is currently selling for $\$ 40$ per share. The dividend expected to be paid at the end of the coming year is $\$ 5.07$. Its dividend payments have been growing at a constant rate for the last five years. Five years ago, the dividend was $\$ 3.45$. It is expected that to sell, a new common stock issue must be underpriced at $\$ 1$ per share and the firm must pay $\$ 1$ per share in flotation costs. Additionally, the firm's marginal tax rate is 40 percent.
Calculate the firm's weighted average cost of capital assuming the firm has exhausted all retained earnings.
34. Little LAM, Inc. has decided to invest $\$ 10,000,000$ in a new headquarters and needs to determine the best way to finance the construction. The firm currently has $\$ 50,000,000$ of 10 percent bonds and 4,000,000 common shares outstanding. The firm can obtain the $\$ 10,000,000$ of financing through a 10 percent bond issue or the sale of $1,000,000$ shares of common stock. The firm has a 40 percent tax rate.
a. What is the degree of financial leverage for each plan at $\$ 25,000,000$ of EBIT?
b. What is the financial breakeven point for each plan?
35. Caswell Cassey Pharmaceutical has a stockholders' equity account as shown below. The firm's common stock currently sells for \$20 per share.
Preferred stock
$\$ 500,000$

Common stock (2,000,000 shares @ \$1 par)

$$
2,000,000
$$

Paid in capital in excess of par
10,000,000
Retained earnings
11,600,000

Total stockholders' equity
\$24,100,000
a. What is the maximum dividend per share Caswell Casey can pay? (Assume capital includes all paid in capital.)
b. Recast the partial balance sheet (the stockholders' equity accounts) to show independently

1. a 2 for 1 stock split of the common stock.
2. a cash dividend of $\$ 1.50$ per share.
3. a stock dividend of $5 \%$ on the common stock.
c. At what price would you expect the Caswell Cassey stock to sell after
4. the stock split?
5. the stock dividend?
