國立成功大學
113學年度碩士班招生考試試題

編　號：223

系　所：財務金融研究所

科　目：財務管理

日　期：0202

節　次：第 2 節

備　註：可使用計算機

※ 考生請注意：本試題可使用計算機。　請於答案卷(卡)作答，於本試題紙上作答者，不予計分。

Section A: Multiple Choice Questions (80 marks, 4 points each)

Please answer your questions in capital letters (e.g., A, B, etc.)

1. Which of the following statements is most correct?
   a. EVA is a measure of the value added to customers.
   b. EVA is a measure of the value added to management.
   c. EVA is a measure of the firm's true profitability.
   d. EVA is a measure of management compensation.
   e. EVA is a measure of stock price.

2. Other things held constant, (1) if the expected inflation rate decreases, and (2) investors become more risk averse, the Security Market Line would shift
   a. Down and have steeper slope.
   b. Up and have less steep slope.
   c. Up and keep same slope.
   d. Down and keep same slope.
   e. Down and have less steep slope.

3. Which of the following statements is most correct?
   a. "Characteristic line" is another name for the Security Market Line.
   b. The characteristic line is the regression line that results from plotting the returns on a particular stock versus the returns on a stock from a different industry.
   c. The slope of the characteristic line is the stock's standard deviation.
   d. The distance of the plot points from the characteristic line is a measure of the stock's market risk.
   e. The distance of the plot points from the characteristic line is a measure of the stock's diversifiable risk.

4. Which of the following statements is most correct?
   a. A *callable* 10-year, 10 percent bond should sell at a higher price than an otherwise similar noncallable bond.
   b. Two bonds have the same maturity and the same coupon rate. However, one is callable and the other is not. The difference in prices between the bonds will be greater if the current market interest rate is *below* the coupon rate than if it is above the coupon rate.
   c. Two bonds have the same maturity and the same coupon rate. However, one is callable and the other is not. The difference in prices between the bonds will be greater if the current market interest rate is *above* the coupon rate than if it is below the coupon rate.
   d. The actual life of a callable bond will be equal to or less than the actual life of a noncallable bond with the same maturity date. Therefore, if the yield curve is upward sloping, the required rate of return will be lower on the callable bond.
   e. Corporate treasurers *dislike* issuing callable bonds because these bonds may require the company to raise additional funds earlier than would be true if noncallable bonds with the same maturity were used.

5. You have been given the following projections for Cali Corporation for the coming year.

Sales	=	10,000 units
Sales price per unit	=	$10
Variable cost per unit	=	$5
Fixed costs	=	$10,000
Bonds outstanding	=	$15,000
r_d on outstanding bonds	=	8%
Tax rate	=	40%
Shares of common stock outstanding	=	10,000 shares
Beta	=	1.4
r_{RF}	=	5%
r_M	=	9%
Dividend payout ratio	=	60%
Growth rate	=	8%

Calculate the current price per share for Cali Corporation.

a. $35.22
b. $46.27
c. $48.55
d. $53.72
e. $59.76

6. Mays Industries was established in 1999. Since its inception, the company has generated the following levels of earnings before taxes (EBT) (losses are shown in parentheses):

Year	EBT
1999	$ 50,000
2000	40,000
2001	30,000
2002	20,000
2003	(60,000)
2004	60,000

Assume that *each year* the company has faced a 40 percent income tax rate. Also, assume that current carry back and carry forward provisions were available in prior years. What is the company's tax liability for 2004

a. $20,000
b. $21,000
c. $22,000
d. $24,000
e. $26,000

7. Blair Company has $5 million in total assets. The company's assets are financed with $1 million of debt, and $4 million of common equity. The company's income statement is summarized below:

Operating Income (EBIT)	$1,000,000
Interest Expense	100,000
Earnings before tax (EBT)	$ 900,000
Taxes (40%)	360,000
Net Income	$ 540,000

The company wants to increase its assets by $1 million, and it plans to finance this increase by issuing $1 million in new debt. This action will double the company's interest expense, but its operating income will remain at 20 percent of its total assets, and its average tax rate will remain at 40 percent. If the company takes this action, which of the following will occur:

a. The company's net income will increase.
b. The company's return on assets will fall.
c. The company's return on equity will remain the same.
d. Statements a and b are correct.
e. All of the answers above are correct.

8. The Tapley Company is trying to determine an acceptable growth rate in sales. While the firm wants to expand, it does not want to use any external funds to support such expansion due to the particularly high interest rates in the market now. Having gathered the following data for the firm, what is the maximum growth rate it can sustain without requiring additional funds?

Capital intensity ratio = 1.2
Profit margin = 10%
Dividend payout ratio = 50%
Current sales = $100,000
Spontaneous liabilities = $10,000

a. 3.6%
b. 4.8%
c. 5.2%
d. 6.1%
e. 5.7%

9. An analyst has collected the following information regarding Christopher Co.:

- The company's capital structure is 70 percent equity, 30 percent debt.
- The yield to maturity on the company's bonds is 9 percent.
- The company's year-end dividend is forecasted to be $0.80 a share.
- The company expects that its dividend will grow at a constant rate of 9 percent a year.
- The company's stock price is $25.
- The company's tax rate is 40 percent.
- The company anticipates that it will need to raise new common stock this year. Its investment bankers anticipate that the total flotation cost will equal 10 percent of the amount issued. Assume the company accounts for flotation costs by adjusting the cost of capital. Given this information, calculate the company's WACC.

a. 10.41%
b. 12.56%
c. 10.78%
d. 13.55%
e. 9.29%

10. A company forecasts the following free cash flows (shown in millions of dollars). If the weighted average cost of capital is 13 percent and the free cash flows are expected to continue growing at the same rate after Year 3, what is the Year 0 value of operations, to the nearest million?

Year:	1	2	3
Free cash flow:	-$20	$40	$42

a. $382 million
b. $488 million
c. $460 million
d. $475 million
e. $425 million

11. Suppose the firm's WACC is stated in nominal terms, but the project's expected cash flows are expressed in real dollars. In this situation, other things held constant, the calculated NPV would

a. Be correct.
b. Be biased downward.
c. Be biased upward.
d. Possibly have a bias, but it could be upward or downward.
e. More information is needed; otherwise, we can make no reasonable statement.

12. Consider the following project data:
(1) A $500 feasibility study will be conducted at t = 0.
(2) If the study indicates potential, the firm will spend $1,000 at t = 1 to build a prototype. The best estimate now is that there is an 80 percent chance that the study will indicate potential, and a 20 percent chance that it will not.
(3) If reaction to the prototype is good, the firm will spend $10,000 to build a production plant at t = 2. The best estimate now is that there is a 60 percent chance that the reaction to the prototype will be good, and a 40 percent chance that it will be poor.
(4) If the plant is built, there is a 50 percent chance of a t = 3 cash inflow of $16,000 and a 50 percent chance of a $13,000 cash inflow.

If the appropriate cost of capital is 10 percent, what is the project's expected NPV?
a. -$35
b. -$12
c. $ 0
d. $12
e. $35

13. Which of the following statements is *false*? As a firm increases its operating leverage for a given quantity of output, this
a. changes its operating cost structure.
b. increases its business risk.
c. decreases its financial leverage.
d. increases the variability in earnings per share.
e. increases the standard deviation of its EBIT.

14. Trumbull, Inc., has total value (debt plus equity) of $5 million and $2 million face value of 1-year zero coupon debt. The volatility (σ) of Trumbull's total value is 0.60, and the risk free rate is 5 percent. Assume that $N(d_1) = 0.9720$ and $N(d_2) = 0.9050$. What is the yield on Trumbull's debt?
a. 5.0%
b. 6.0%
c. 6.9%
d. 7.4%
e. 8.8%

15. Driver Corporation has plans calling for a capital budget of $60 million. Its optimal capital structure is 60 percent equity and 40 percent debt. Its earnings before interest and taxes (EBIT) were $98 million for the year. The firm has $200 million in assets, pays an average of 10 percent on all its debt, and faces a marginal tax rate of 35 percent. If the firm maintains a residual dividend policy and will keep its optimal capital structure intact, what will be the amount of the dividends it pays out after financing its capital budget?
a. $22.5 million
b. $59.4 million
c. $60.0 million
d. $30.0 million
e. $ 0

16. Vogril Company issued 20-year, zero coupon bonds with an expected yield to maturity of 9 percent. The bonds have a par value of $1,000 and were sold for $178.43 each. What is the expected interest expense on these bonds in Year 8?
   a. $29.35
   b. $32.00
   c. $90.00
   d. $26.12
   e. $25.79

17. The lease analysis should compare the cost of leasing to the
   a. Cost of owning using debt.
   b. Cost of owning using equity.
   c. After-tax cost of debt to measure the effect of leasing on the cost of equity.
   d. Average cost of all fixed charges.
   e. Cost of owning using the weighted average cost of capital for the firm.

18. Deep River Power Corporation recently sold an issue of preferred stock that had an after-tax yield of 9.6 percent. The company's new bonds recently sold at par with an after-tax yield of 8.1 percent. Both issues were placed primarily with corporate investors in the 40 percent tax bracket. Given that the preferred stock enjoys a 70 percent dividend tax exclusion for corporate investors, what was the percentage point difference in the *before-tax yields* between the two issues?
   a. 1.50%
   b. 1.20%
   c. 2.59%
   d. 2.81%
   e. 0.21%

19. Which of the following statement completions is most correct? If the yield curve is upward sloping, then a firm's marketable securities portfolio, assumed to be held for liquidity purposes, should be
   a. Weighted toward long-term securities because they pay higher rates.
   b. Weighted toward short-term securities because they pay higher rates.
   c. Weighted toward U.S. Treasury securities to avoid interest rate risk.
   d. Weighted toward short-term securities to avoid interest rate risk.
   e. Balanced between long- and short-term securities to minimize the effects of either an upward or a downward trend in interest rates.

20. Trumble oboes is considering a merger with Krieble trombones. Krieble's market determined beta is 0.9 and it is currently financed at a debt level of 20%, at an interest rate of 8%. Krieble faces a 25% tax rate. If Trumble acquires Krieble, it will increase the debt level to 60%, at an interest rate of 9 percent, and the tax rate will increase to 35%. The risk free rate is 6% and the market risk premium is 4%. What will Krieble's required rate of return be after it is acquired?
a. 7.4%
b. 8.9%
c. 9.3%
d. 9.6%
e. 9.7%

Section B: Essay Questions (20 marks)

1. Does the asymmetric information theory of capital structure apply to not-for-profit businesses? Provide your answer in English ONLY. **(10 marks)**

2. Evaluate the following statement "Issuing convertible securities is a means by which a firm can sell common stock for more than the existing market price." Provide your answer in English ONLY. **(10 marks)**