國立成功大學

115學年度碩士班招生考試試題

編　號：153

系　所：財務金融研究所

科　目：財務管理

日　期：0204

節　次：第 2 節

注　意：1.可使用計算機
2.請於答案卷(卡)作答，於試題上作答，不予計分。

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

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

1. You are on the staff of Camden Inc. The CFO believes project acceptance should be based on the NPV, but Steve Camden, the president, insists that no project should be accepted unless its IRR exceeds the project's risk-adjusted WACC. Now you must make a recommendation on a project that has a cost of $15,000 and two cash flows: $110,000 at the end of Year 1 and -$100,000 at the end of Year 2. The president and the CFO both agree that the appropriate WACC for this project is 10%. At 10%, the NPV is $2,355.37, but you find two IRRs, one at 6.33% and one at 527%, and a MIRR of 11.32%. Which of the following statements best describes your optimal recommendation, i.e., the analysis and recommendation that is best for the company and least likely to get you in trouble with either the CFO or the president?

   a. You should recommend that the project be rejected because its NPV is negative and its IRR is less than the WACC.
   b. You should recommend that the project be rejected because, although its NPV is positive, it has an IRR that is less than the WACC.
   c. You should recommend that the project be accepted because (1) its NPV is positive and (2) although it has two IRRs, in this case it would be better to focus on the MIRR, which exceeds the WACC. You should explain this to the president and tell him that the firm's value will increase if the project is accepted.
   d. You should recommend that the project be rejected. Although its NPV is positive it has two IRRs, one of which is less than the WACC, which indicates that the firm's value will decline if the project is accepted.
   e. You should recommend that the project be rejected because, although its NPV is positive, its MIRR is less than the WACC, and that indicates that the firm's value will decline if it is accepted.

2. Aggarwal Enterprises is considering a new project that has a cost of $1,000,000, and the CFO set up the following simple decision tree to show its three most likely scenarios. The firm could arrange with its work force and suppliers to cease operations at the end of Year 1 should it choose to do so, but to obtain this abandonment option, it would have to make a payment to those parties. How much is the option to abandon worth to the firm?

WACC = 11.5%	Dollars in Thousands				NPV This	Prob. ×
	t = 0	t = 1	t = 2	t = 3	State	NPV
Prob. = 20%		↗ $800.0	$800.0	$800.0	$938.10	$187.62
Prob. = 60%	-$1,000	→ $520.0	$520.0	$520.0	$259.76	$155.86
Prob. = 20%		↘ -$200.0	-$200.0	-$200.0	-$1,484.52	-$296.90
					Exp. NPV =	$ 46.57

a. $61.03
b. $64.08
c. $67.29
d. $55.08
e. $57.98

3. Which of the following statements is CORRECT?
a. Since accounts payable and accrued liabilities must eventually be paid off, as these accounts increase, AFN as calculated by the AFN equation must also increase.
b. Suppose a firm is operating its fixed assets at below 100% of capacity, but it has no excess current assets. Based on the AFN equation, its AFN will be larger than if it had been operating with excess capacity in both fixed and current assets.
c. If a firm retains all of its earnings, then it cannot require any additional funds to support sales growth.
d. Additional funds needed (AFN) are typically raised using a combination of notes payable, long-term debt, and common stock. Such funds are non-spontaneous in the sense that they require explicit financing decisions to obtain them.
e. If a firm has a positive free cash flow, then it must have either a zero or a negative AFN.

4. Vasudevan Inc. forecasts the free cash flows (in millions) shown below. If the weighted average cost of capital is 13% and the free cash flows are expected to continue growing at the same rate after Year 3 as from Year 2 to Year 3, what is the Year 0 value of operations, in millions?

Year:	1	2	3
Free cash flow:	-$20	$42	$45

a. $586
b. $617
c. $648
d. $680
e. $714

5. The following data in millions apply to Grullon-Ikenberry Inc. (GII):

Value of operations	$1,000
Short-term investments	$100
Debt	$300
Number of shares	$100

The company plans on distributing $100 million as dividend payments. What will the intrinsic per share stock price be immediately after the distribution?

a. $7.00
b. $6.65
c. $5.35
d. $7.35
e. $7.72

6. Swim Suits Unlimited is in a highly seasonal business, and the following summary balance sheet data show its assets and liabilities at peak and off-peak seasons (in thousands of dollars):

	Peak	Off-Peak
Cash	$ 50	$ 30
Marketable securities	0	20
Accounts receivable	40	20
Inventories	100	50
Net fixed assets	500	500
Total assets	$690	$620
Payables and accruals	$ 30	$ 10
Short-term bank debt	50	0
Long-term debt	300	300
Common equity	310	310
Total claims	$690	$620

From this data we may conclude that

a. Swim Suits' current asset financing policy calls for exactly matching asset and liability maturities.
b. Swim Suits' current asset financing policy is relatively aggressive; that is, the company finances some of its permanent assets with short-term discretionary debt.
c. Without income statement data, we cannot determine the aggressiveness or conservatism of the company's current asset financing policy.
d. Without cash flow data, we cannot determine the aggressiveness or conservatism of the company's current asset financing policy.
e. Swim Suits follows a relatively conservative approach to current asset financing; that is, some of its short-term needs are met by permanent capital.

7. Suppose a U.S. firm buys $200,000 worth of television tubes from a Mexican manufacturer for delivery in 60 days with payment to be made in 90 days (30 days after the goods are received). The rising U.S. deficit has caused the dollar to depreciate against the peso recently. The current exchange rate is 5.50 pesos per U.S. dollar. The 90-day forward rate is 5.45 pesos/dollar. The firm goes into the forward market today and buys enough Mexican pesos at the 90-day forward rate to completely cover its trade obligation. Assume the spot rate in 90 days is 5.30 Mexican pesos per U.S. dollar. How much in U.S. dollars did the firm save by eliminating its foreign exchange currency risk with its forward market hedge?

a. $0
b. $1,834.86
c. $4,517.26
d. $5,712.31
e. $7,547.17

8. Financial Accounting Standards Board (FASB) Statement #13 requires that for an unqualified audit report, financial (or capital) leases must be included in the balance sheet by reporting the

a. present value of future lease payments as an asset and also showing this same amount as an offsetting liability.
b. residual value as a fixed asset.
c. residual value as a liability.
d. undiscounted sum of future lease payments as an asset and as an offsetting liability.
e. undiscounted sum of future lease payments, less the residual value, as an asset and as an offsetting liability.

9. Upstate Water Company just sold a bond with 50 warrants attached. The bonds have a 20-year maturity and an annual coupon of 12%, and they were issued at their $1,000 par value. The current yield on similar straight bonds is 15%. What is the implied value of each warrant?

a. $3.76
b. $3.94
c. $4.14
d. $4.35
e. $4.56

10. Kotomin Inc. wants to sell stock via a rights offering. The company has 1,000,000 shares outstanding, and they sell for $90 per share. The new issue will be used to raise $8 million of new equity, and existing shareholders will receive one right per share held. Theoretically, if the subscription price is $80, (1) how many new shares must be sold, (2) how many rights per share of new stock will be required, (3) what will the value of each right be, and (4) what will the stock price be after the rights offering has been completed?

	New Shs	No. of Rights	Value	Ending Price
a.	100,000	8	$1.38	$88.62
b.	100,000	9	$1.05	$88.95
c.	120,000	8	$1.05	$88.95
d.	120,000	10	$1.38	$88.62
e.	100,000	10	$0.91	$89.09

11. Which of the following statements concerning common stock and the investment banking process is **NOT** CORRECT?

a. The preemptive right gives each existing common stockholder the right to purchase his or her proportionate share of a new stock issue.

b. If a firm sells 1,000,000 new shares of Class B stock, the transaction occurs in the primary market.

c. Listing a large firm's stock is often considered to be beneficial to stockholders because the increases in liquidity and reputation probably outweigh the additional costs to the firm.

d. Stockholders have the right to elect the firm's directors, who in turn select the officers who manage the business. If stockholders are dissatisfied with management's performance, an outside group may ask the stockholders to vote for it in an effort to take control of the business. This action is called a tender offer.

e. The announcement of a large issue of new stock could cause the stock price to fall. This loss is called "market pressure," and it is treated as a flotation cost because it is a cost to stockholders that is associated with the new issue.

12. Blazer Inc. is thinking of acquiring Laker Company. Blazer expects Laker's NOPAT to be $9 million the first year, with no net new investment in operating capital and no interest expense. For the second year, Laker is expected to have NOPAT of $25 million and interest expense of $5 million. Also, in the second year only, Laker will need $10 million of net new investment in operating capital. Laker's marginal tax rate is 40%. After the second year, the free cash flows and the tax shields from Laker to Blazer will both grow at a constant rate of 4%. Blazer has determined that Laker's cost of equity is 17.5%, and Laker currently has no debt outstanding. Assume that all cash flows occur at the end of the year, Blazer must pay $45 million to acquire Laker. What it the NPV of the proposed acquisition? Note that you must first calculate the value to Blazer of Laker's equity.

a. $ 45.0 million
b. $ 86.5 million
C. $ 95.2 million
d. $113.2 million
e. $133.0 million

13. Which of the following statements is most CORRECT?

a. Our bankruptcy laws were enacted in the 1800s, revised in the 1930s, and have remained unaltered since that time.
b. Federal bankruptcy law deals only with corporate bankruptcies. Municipal and personal bankruptcy are governed solely by state laws.
c. All bankruptcy petitions are filed by creditors seeking to protect their claims against firms in financial distress. Thus, all bankruptcy petitions are involuntary as viewed from the perspective of the firm's management.
d. "Restructuring" a firm's debt can involve forgiving a certain portion of the debt, but it cannot call for changing the debt's maturity or its contractual interest rate.
e. Chapters 11 and 7 are the most important bankruptcy chapters for financial management purposes. If a reorganization plan cannot be worked out under Chapter 11, then the company will be liquidated as prescribed in Chapter 7 of the Act.

14. Company A can issue floating-rate debt at LIBOR + 1%, and it can issue fixed rate debt at 9%. Company B can issue floating-rate debt at LIBOR + 1.5%, and it can issue fixed-rate debt at 9.4%. Suppose A issues floating-rate debt and B issues fixed-rate debt, after which they engage in the following swap: A will make a fixed 7.95% payment to B, and B will make a floating-rate payment equal to LIBOR to A. What are the resulting net payments of A and B?

a. A pays a fixed rate of 8.95%, B pays LIBOR + 1.45%.
b. A pays a fixed rate of 9%, B pays LIBOR + 1.5%.
c. A pays LIBOR plus 1%, B pays a fixed rate of 9.4%.
d. A pays a fixed rate of 7.95%, B pays LIBOR.
e. None of the above answers is correct.

15. You are given the following returns on "the market" and Stock Q during the last three years. We could calculate beta using data for Years 1 and 2 and then, after Year 3, calculate a new beta for Years 2 and 3. How different are those two betas, i.e., what's the value of beta 2 - beta 1?

Year	Market	Stock Q
1	6.10%	6.50%
2	12.90%	-3.70%
3	16.20%	21.71%

a. 7.89
b. 8.30
c. 8.74
d. 9.20
e. 9.66

16. Jane has a portfolio of 20 average stocks, and Dick has a portfolio of 2 average stocks. Assuming the market is in equilibrium, which of the following statements is CORRECT?
a. Jane's portfolio will have less diversifiable risk and also less market risk than Dick's portfolio.
b. The required return on Jane's portfolio will be lower than that on Dick's portfolio because Jane's portfolio will have less total risk.
c. Dick's portfolio will have more diversifiable risk, the same market risk, and thus more total risk than Jane's portfolio, but the required (and expected) returns will be the same on both portfolios.
d. If the two portfolios have the same beta, their required returns will be the same, but Jane's portfolio will have less market risk than Dick's.
e. The expected return on Jane's portfolio must be lower than the expected return on Dick's portfolio because Jane is more diversified.

17. Agarwal Technologies was founded 10 years ago. It has been profitable for the last 5 years, but it has needed all of its earnings to support growth and thus has never paid a dividend. Management has indicated that it plans to pay a $0.25 dividend 3 years from today, then to increase it at a relatively rapid rate for 2 years, and then to increase it at a constant rate of 8.00% thereafter. Management's forecast of the future dividend stream, along with the forecasted growth rates, is shown below. Assuming a required return of 11.00%, what is your estimate of the stock's current value?

Year	0	1	2	3	4	5	6
Growth rate	NA	NA	NA	NA	50.00%	25.00%	8.00%
Dividends	$0.000	$0.000	$0.000	$0.250	$0.375	$0.469	$0.506

a. $ 9.94
b. $10.19
c. $10.45
d. $10.72
e. $10.99

18. The current price of a stock is $50, the annual risk-free rate is 6%, and a 1-year call option with a strike price of $55 sells for $7.20. What is the value of a put option, assuming the same strike price and expiration date as for the call option?

a. $9.00
b. $8.55
c. $8.12
d. $7.35
e. $6.50

19. Which of the following statements regarding a 30-year monthly payment amortized mortgage with a nominal interest rate of 10% is CORRECT?

a. The monthly payments will increase over time.
b. A larger proportion of the first monthly payment will be interest, and a smaller proportion will be principal, than for the last monthly payment.
c. The total dollar amount of interest being paid off each month gets larger as the loan approaches maturity.
d. The amount representing interest in the first payment would be higher if the nominal interest rate were 7% rather than 10%.
e. Exactly 10% of the first monthly payment represents interest.

20. Fullerton Wine Company is a retailer which sells vintage wines. The company has established a policy of reordering inventory every 30 days. A recently employed MBA has considered Fullerton's inventory problem from the EOQ model viewpoint. If the following constitute the relevant data, how does the current policy compare with the optimal policy?

Ordering cost	= $10 per order
Carrying cost	= 20% of purchase price
Purchase price	= $10 per unit
Total sales for year	= 1,000 units
Safety stock	= 0

a. Total costs under the current policy exceed those under the EOQ by $3.
b. Total costs will be the same, since the current policy is optimal.
c. Total costs under the current policy will be less than total costs under the EOQ by $10.
d. Total costs under the current policy exceed those under the EOQ by $10.
e. Cannot be determined due to insufficient information.

Section B: Essay Questions (20 marks)

1. What is frame dependence? How can frame dependence influence market efficeincy? Provide your answer in English ONLY. **(10 marks)**

2. Modigliani and Miller assume that firms do not grow. How does positive growth change their conclusions about the value of the levered firm and its cost of capital? Provide your answer in English ONLY. **(10 marks)**