

國立成功大學

111學年度碩士班招生考試試題

編 號：232

系 所：財務金融研究所

科 目：財務管理

日 期：0220

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)**

1. 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):

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

From this data we may conclude that

- Swim Suits' current asset financing policy calls for exactly matching asset and liability maturities.
  - Swim Suits' current asset financing policy is relatively aggressive; that is, the company finances some of its permanent assets with short-term discretionary debt.
  - Swim Suits follows a relatively conservative approach to current asset financing; that is, some of its short-term needs are met by permanent capital.
  - Without income statement data, we cannot determine the aggressiveness or conservatism of the company's current asset financing policy.
  - Without cash flow data, we cannot determine the aggressiveness or conservatism of the company's current asset financing policy.
2. Blenman Corporation, based in the United States, arranged a 2-year, \$1,000,000 loan to fund a project in Mexico. The loan is denominated in Mexican pesos, carries a 10.0% nominal rate, and requires equal semiannual payments. The exchange rate at the time of the loan was 5.75 pesos per dollar, but it dropped to 5.10 pesos per dollar before the first payment came due. The loan was not hedged in the foreign exchange market. Thus, Blenman must convert

- U.S. funds to Mexican pesos to make its payments. If the exchange rate remains at 5.10 pesos per dollar through the end of the loan period, what effective interest rate will Blenman end up paying on the loan?
- a. 10.36%
  - b. 11.50%
  - c. 17.44%
  - d. 20.00%
  - e. 21.79%
3. Kohers Inc. is considering a leasing arrangement to finance some manufacturing tools that it needs for the next 3 years. The tools will be obsolete and worthless after 3 years. The firm will depreciate the cost of the tools on a straight-line basis over their 3-year life. It can borrow \$4,800,000, the purchase price, at 10% and buy the tools, or it can make 3 equal end-of-year lease payments of \$2,100,000 each and lease them. The loan obtained from the bank is a 3-year simple interest loan, with interest paid at the end of the year. The firm's tax rate is 40%. Annual maintenance costs associated with ownership are estimated at \$240,000, but this cost would be borne by the lessor if it leases. What is the net advantage to leasing (NAL), in thousands?
- a. \$96
  - b. \$106
  - c. \$112
  - d. \$117
  - e. \$123
4. 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

5. Autore Company's stock now sells for \$50 per share, and there are 10,000,000 shares outstanding. The company plans to raise \$100 million as new equity by selling common stock. Since the preemptive right is in the corporate charter, rights will be used. Management has decided that the rights should be worth \$1 each. Such a price would assure that most stockholders would either exercise or sell their rights rather than just letting them expire, yet a careless failure to use the rights would not impose too severe a hardship on anyone. What subscription price should Autore set for its offering to obtain the desired price of the rights, and what will be the ex-rights stock price ( $M_e$ ), assuming the theoretical relationships hold? (Hint:  $N = \text{Number of old shares} / \text{Number of new shares}$ ;  $\text{Number of new shares} = \text{Dollars to be raised} / \text{Subscription price per share}$ .)

	<u>Sub Price</u>	<u>Ex-rights</u>
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- |    |          |         |
|----|----------|---------|
| a. | \$39.65; | \$42.50 |
| b. | \$40.25; | \$43.50 |
| c. | \$42.65; | \$47.50 |
| d. | \$44.55; | \$49.00 |
| e. | \$46.65; | \$50.00 |
6. Which of the following statements is most CORRECT?
- a. Firms that are acquired usually have a market price below book value before the merger offer is made. However, once the initial offer is made, the price can rise above book value, but the purchase price, especially in large acquisitions, generally remains within 20% of book value.
  - b. When Texaco purchased Getty Oil, many financial analysts felt that the deal made sense because it increased Texaco's market share and expanded its shrinking oil reserves. This merger exemplified the belief among the natural resource companies that buying reserves through acquisitions was less costly than exploring and finding them in the field.
  - c. When Mobil Oil Company tried to acquire Conoco, which was another oil company, stockholders were concerned that the U.S. Justice Department would try to block the merger because it would lessen competition. Thus, antitrust considerations affected this proposed horizontal merger.
  - d. Answers b and c are correct.
  - e. All of the statements above are false.
7. Chapter 7 of the Bankruptcy Act is designed to do which of the following?
- a. Protect shareholders against creditors.
  - b. Establish the rules of reorganization for firms with projected cash flows that eventually will be sufficient to meet debt payments.
  - c. Ensure that the firm is viable after emerging from bankruptcy.

- d. Allow the firm to negotiate with each creditor individually.
- e. Provide safeguards against the withdrawal of assets by the owners of the bankrupt firm and allow insolvent debtors to discharge all of their obligations and to start over unhampered by a burden of prior debt.
8. Suppose the September CBOT Treasury bond futures contract has a quoted price of 89-09. What is the implied annual interest rate inherent in this futures contract?
- a. 6.32%
- b. 6.65%
- c. 7.00%
- d. 7.35%
- e. 7.72%
9. Data for Oakdale Furniture, Inc. is shown below. Now the expected inflation rate and thus the inflation premium increase by 2.0 percentage points, and Oakdale acquires risky assets that increase its beta by the indicated percentage. What is the firm's new required rate of return?
- |                              |        |
|------------------------------|--------|
| Beta:                        | 1.50   |
| Required return ( $r_s$ )    | 10.20% |
| $RP_M$ :                     | 6.00%  |
| Percentage increase in beta: | 20%    |
- a. 14.00%
- b. 14.70%
- c. 15.44%
- d. 16.21%
- e. 17.02%
10. Which of the following is **NOT** a real option?
- a. The option to expand production if the product is successful.
- b. The option to buy shares of stock if its price goes up.
- c. The option to expand into a new geographic region.
- d. The option to abandon a project.
- e. The option to switch the type of fuel used in an industrial furnace.

11. Firm L has debt with a market value of \$200,000 and a yield of 9%. The firm's equity has a market value of \$300,000, its earnings are growing at a 5% rate, and its tax rate is 40%. A similar firm with no debt has a cost of equity of 12%. Under the MM extension with growth, what would Firm L's total value be if it had no debt?
- a. \$358,421
  - b. \$377,286
  - c. \$397,143
  - d. \$417,000
  - e. \$437,850
12. Which of the following statements is most correct?
- a. If you were testing dividend theories and found that a dividend increase resulted in higher stock prices, then you could rule out all other theories and conclude that the bird-in-the-hand theory was most consistent with the evidence you found.
  - b. The clientele effect suggests that investors choose their investments based on firms' past dividend policies and changes to established dividend policies may be costly to investors.
  - c. Dividends paid under a residual dividend policy might send conflicting signals to investors.
  - d. Both statements b and c are correct.
  - e. All of the statements above are correct.
13. Which of the following statements is CORRECT?
- a. If the returns on two stocks are perfectly positively correlated (i.e., the correlation coefficient is +1.0) and these stocks have identical standard deviations, an equally weighted portfolio of the two stocks will have a standard deviation that is less than that of the individual stocks.
  - b. A portfolio with a large number of randomly selected stocks would have more market risk than a single stock that has a beta of 0.5, assuming that the stock's beta was correctly calculated and is stable.
  - c. If a stock has a negative beta, its expected return must be negative.
  - d. A portfolio with a large number of randomly selected stocks would have less market risk than a single stock that has a beta of 0.5.
  - e. According to the CAPM, stocks with higher standard deviations of returns must also have higher expected returns.



14. A stock is expected to pay a year-end dividend of \$2.00, i.e.,  $D_1 = \$2.00$ . The dividend is expected to decline at a rate of 5% a year forever ( $g = -5\%$ ). If the company is in equilibrium and its expected and required rate of return is 15%, which of the following statements is CORRECT?
- The company's current stock price is \$20.
  - The company's dividend yield 5 years from now is expected to be 10%.
  - The constant growth model cannot be used because the growth rate is negative.
  - The company's expected capital gains yield is 5%.
  - The company's expected stock price at the beginning of next year is \$9.50.
15. The MacMillen Company has equal amounts of low-risk, average-risk, and high-risk projects. The firm's overall WACC is 12%. The CFO believes that this is the correct WACC for the company's average-risk projects, but that a lower rate should be used for lower-risk projects and a higher rate for higher-risk projects. The CEO disagrees, on the grounds that even though projects have different risks, the WACC used to evaluate each project should be the same because the company obtains capital for all projects from the same sources. If the CEO's position is accepted, what is likely to happen over time?
- The company will take on too many high-risk projects and reject too many low-risk projects.
  - The company will take on too many low-risk projects and reject too many high-risk projects.
  - Things will generally even out over time, and, therefore, the firm's risk should remain constant over time.
  - The company's overall WACC should decrease over time because its stock price should be increasing.
  - The CEO's recommendation would maximize the firm's intrinsic value.
16. Projects S and L both have an initial cost of \$10,000, followed by a series of positive cash inflows. Project S's undiscounted net cash flows total \$20,000, while L's total undiscounted flows are \$30,000. At a WACC of 10%, the two projects have identical NPVs. Which project's NPV is more sensitive to changes in the WACC?
- Project S.
  - Project L.
  - Both projects are equally sensitive to changes in the WACC since their NPVs are equal at all costs of capital.
  - Neither project is sensitive to changes in the discount rate, since both have NPV profiles that are horizontal.
  - The solution cannot be determined because the problem gives us no information that can be used to determine the projects' relative IRRs.

17. Which one of the following would NOT result in incremental cash flows and thus should NOT be included in the capital budgeting analysis for a new product?
- a. A firm has a parcel of land that can be used for a new plant site or be sold, rented, or used for agricultural purposes.
  - b. A new product will generate new sales, but some of those new sales will be from customers who switch from one of the firm's current products.
  - c. A firm must obtain new equipment for the project, and \$1 million is required for shipping and installing the new machinery.
  - d. A firm has spent \$2 million on R&D associated with a new product. These costs have been expensed for tax purposes, and they cannot be recovered regardless of whether the new project is accepted or rejected.
  - e. A firm can produce a new product, and the existence of that product will stimulate sales of some of the firm's other products.
18. Which of the following statements regarding a 15-year (180-month) \$125,000, fixed-rate mortgage is CORRECT? (Ignore taxes and transactions costs.)
- a. The remaining balance after three years will be \$125,000 less one third of the interest paid during the first three years.
  - b. Because the outstanding balance declines over time, the monthly payments will also decline over time.
  - c. Interest payments on the mortgage will increase steadily over time, but the total amount of each payment will remain constant.
  - d. The proportion of the monthly payment that goes towards repayment of principal will be lower 10 years from now than it will be the first year.
  - e. The outstanding balance declines at a faster rate in the later years of the loan's life.
19. You agree to make 24 deposits of \$500 at the beginning of each month into a bank account. At the end of the 24<sup>th</sup> month, you will have \$13,000 in your account. If the bank compounds interest monthly, what nominal annual interest rate will you be earning?
- a. 7.62%
  - b. 8.00%
  - c. 8.40%
  - d. 8.82%
  - e. 9.26%



20. If the pure expectations theory is correct, which of the following is CORRECT?

- a. An upward-sloping Treasury yield curve means that the market expects interest rates to decline in the future.
- b. A 5-year T-bond would always yield less than a 10-year T-bond.
- c. The yield curve for corporate bonds may be upward sloping even if the Treasury yield curve is flat.
- d. The yield curve for stocks must be above that for bonds, but both yield curves must have the same slope.
- e. If the maturity risk premium is zero for Treasury bonds, then it must be negative for corporate bonds.

**Section B: Essay Questions (20 marks)**

1. Taxes are an important consideration in the leasing decision. Who is more likely to lease, a profitable corporation in a high tax bracket or a less profitable one in a low tax bracket? Why? Please provide your answer in English ONLY. **(10 marks)**
  
2. Please explicitly discuss whether the share prices of the parent companies in Asia will generally rise or fall following the announcements of spin-offs. Please provide your answer in English ONLY. **(10 marks)**