

國 立 清 華 大 學 命 題 紙

97 學年度 計量財務金融學系(所) 甲(財務金融) 組碩士班入學考試

科目財務管理 科目代碼 5104 共 10 頁 第 1 頁 *請在【答案卷卡】內作答

Directions:

Answer all of the following questions. Read each question carefully, choose the most suitable answer, and write them **orderly** (in upper-case letter, i.e. **A, B, C, D, or E**) on your answer sheet. Each question has exactly **one** correct answer and accounts for 2% of the full score.

1. The length of time required for an investment to generate cash flows sufficient to recover the initial cost of the investment is called the:
 - a. net present value.
 - b. internal rate of return.
 - c. payback period.
 - d. profitability index.
 - e. discounted cash period.

2. The James River Co. pays an annual dividend of \$1.50 per share on its common stock. This dividend amount has been constant for the past 15 years and is expected to remain constant. Given this, one share of James River Co. stock:
 - a. is basically worthless as it offers no growth potential.
 - b. has a market value equal to the present value of \$1.50 paid one year from today.
 - c. is valued as if the dividend paid is a perpetuity.
 - d. is valued with an assumed growth rate of 3%.
 - e. has a market value of \$15.00.

3. Your firm has net income of \$330 on total sales of \$1,400. Costs are \$715 and depreciation is \$145. The tax rate is 25 percent. The firm does not have interest expenses. What is the operating cash flow?
 - a. \$93
 - b. \$575
 - c. \$340
 - d. \$383
 - e. \$515

4. In an efficient market, the price of a security will:
 - a. always rise immediately upon the release of new information with no further price adjustments related to that information.
 - b. react to new information over a two-day period after which time no further price adjustments related to that information will occur.
 - c. rise sharply when new information is first released and then decline to a new stable level by the following day.
 - d. react immediately to new information with no further price adjustments related to that information.
 - e. be slow to react for the first few hours after new information is released allowing time for that information to be reviewed and analyzed.

5. The dividend growth (constant growth) model:
 - I. assumes that dividends increase at a constant rate forever.
 - II. can be used to compute a stock price at any point of time.
 - III. states that the market price of a stock is only affected by the amount of the dividend.
 - IV. considers capital gains but ignores the dividend yield.

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- a. I only
b. II only
c. III and IV only
d. I and II only
e. I, II, and III only
6. Your firm has a \$250,000 bond issue outstanding. These bonds have a 7% coupon, pay interest semiannually, and have a current market price equal to 103% of face value. What is the amount of the annual interest tax shield given a tax rate of 35%?
- a. \$6,125
b. \$6,309
c. \$9,500
d. \$17,500
e. \$18,025
7. Which of the following statements concerning the effective annual rate are correct?
- I. When making financial decisions, you should compare annual percentage rates rather than effective annual rates.
II. The more frequently interest is compounded, the higher the effective annual rate.
III. A quoted rate of 6% compounded continuously has a higher effective annual rate than if the rate were compounded daily.
IV. When borrowing and choosing which loan to accept, you should select the offer with the highest effective annual rate.
- a. I and II only
b. I and IV only
c. I, II, and III only
d. II and III only
e. I, II, III, and IV
8. The Black-Scholes option pricing model is dependent on which five parameters?
- a. Stock price, exercise price, risk free rate, probability, and time to maturity.
b. Stock price, risk free rate, probability, time to maturity, and variance.
c. Stock price, risk free rate, probability, variance and exercise price.
d. Stock price, exercise price, risk free rate, variance and time to maturity.
e. Exercise price, probability, stock price, variance and time to maturity.
9. Peter's Audio Shop has a cost of debt of 7 percent, a cost of equity of 11 percent, and a cost of preferred stock of 8 percent. The firm has 104,000 shares of common stock outstanding at a market price of \$20 a share. There are 40,000 shares of preferred stock outstanding at a market price of \$34 a share. The bond issue has a total face value of \$500,000 and sells at 102 percent of face value. The company's tax rate is 34 percent. What is the weighted average cost of capital for Peter's Audio Shop?
- a. 6.14 percent
b. 6.54 percent
c. 8.60 percent
d. 9.14 percent
e. 9.45 percent

10. The slope of an asset's security market line is the:
- reward-to-risk ratio.
 - portfolio weight.
 - beta coefficient.
 - risk-free interest rate.
 - market risk premium.
11. The bonds issued by Jensen & Son bear a 6 % coupon, payable semiannually. The bond matures in 8 years and has a \$1,000 face value. Currently, the bond sells at par. What is the yield to maturity?
- 5.87 %
 - 5.97 %
 - 6.00 %
 - 6.09 %
 - 6.17 %
12. The efficient set of portfolios
- contains the portfolio combinations with the highest return for a given level of risk.
 - contains the portfolio combinations with the lowest risk for a given level of return.
 - is the lowest overall risk portfolio.
 - Both A and B
 - Both A and C.
13. If a company paid a dividend of \$0.40 now (i.e. the beginning of year 1) and they are expected to grow at 7% for the next 6 years (that is from year 1 to year 6) and then grow at 4% thereafter the dividend expected in year 9 is _____.
- \$ 0.635
 - \$ 0.650
 - \$ 0.675
 - \$ 0.690
 - \$ 0.745
14. The newly issued bonds of the Wynslow Corp. offer a 6 % coupon with semiannual interest payments. The bonds are currently priced at par value. The effective annual rate provided by these bonds must be:
- equal to 3 %.
 - greater than 3 % but less than 4 %.
 - equal to 6 %.
 - greater than 6 % but less than 7 %.
 - equal to 12 %.
15. What is the internal rate of return on an investment with the following cash flows?
- | <u>Year</u> | <u>Cash Flow</u> |
|-------------|------------------|
| 0 | -\$123,400 |
| 1 | \$ 36,200 |
| 2 | \$ 54,800 |
| 3 | \$ 48,100 |
- 5.93 percent

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- b. 5.96 percent
- c. 6.04 percent
- d. 6.09 percent
- e. 6.13 percent

16. The beta of a security is calculated by

- a. dividing the covariance of the security with the market by the variance of the market.
- b. dividing the correlation of the security with the market by the variance of the market.
- c. dividing the variance of the market by the covariance of the security with the market.
- d. dividing the variance of the market by the correlation of the security with the market.
- e. None of the above.

17. You are analyzing the following two mutually exclusive projects and have developed the following information. What is the incremental IRR?

	Project A	Project B
Year	Cash Flow	Cash Flow
0	-\$84,500	-\$76,900
1	\$29,000	\$25,000
2	\$40,000	\$35,000
3	\$27,000	\$26,000

- a. 11.11 percent
- b. 13.01 percent
- c. 14.91 percent
- d. 16.75 percent
- e. 17.90 percent

18. If a firm has low fixed costs relative to all other firms in the same industry, a large change in sales volume (either up or down) would have

- a. a smaller change in EBIT for the firm versus the other firms.
- b. no effect in any way on the firms as volume does not effect fixed costs.
- c. a decreasing effect on the cyclical nature of the business.
- d. a large change in EBIT for the firm versus the other firms.
- e. None of the above.

19. You are considering a project with the following data:

Internal rate of return	8.7 percent
Profitability ratio	.98
Net present value	-\$393
Payback period	2.44 years
Required return	9.5 percent

Which one of the following is correct given this information?

- a. The discount rate used in computing the net present value must have been less than 8.7 percent.
- b. The discounted payback period will have to be less than 2.44 years.
- c. The discount rate used to compute the profitability ratio was equal to the internal rate of return.
- d. This project should be accepted based on the profitability ratio.
- e. This project should be rejected based on the internal rate of return.

20. According to the Capital Asset Pricing Model
- the expected return on a security is negatively and non-linearly related to the security's beta.
 - the expected return on a security is negatively and linearly related to the security's beta.
 - the expected return on a security is positively and linearly related to the security's variance.
 - the expected return on a security is positively and non-linearly related to the security's beta.
 - the expected return on a security is positively and linearly related to the security's beta.
21. You are considering an investment with the following cash flows. If the required rate of return for this investment is 13.5 percent, should you accept it based solely on the internal rate of return rule? Why or why not?
- | <u>Year</u> | <u>Cash Flow</u> |
|-------------|------------------|
| 0 | -\$12,000 |
| 1 | \$ 5,500 |
| 2 | \$ 8,000 |
| 3 | -\$ 1,500 |
- yes; because the IRR exceeds the required return
 - yes; because the IRR is a positive rate of return
 - no; because the IRR is less than the required return
 - no; because the IRR is a negative rate of return
 - You can not apply the IRR rule in this case because there are multiple IRRs.
22. A project is expected to create operating cash flows of \$22,500 a year for three years. The initial cost of the fixed assets is \$50,000. These assets will be worthless at the end of the project. An additional \$3,000 of net working capital will be required throughout the life of the project. Namely, \$3,000 should be considered a cash outflow at the beginning of the investment project. In addition, this \$3,000 will be liquidating at the end of this three-year project. What is the project's net present value if the required rate of return is 10%?
- \$2,208.11
 - \$2,954.17
 - \$4,306.09
 - \$5,208.11
 - \$5,954.17
23. Event studies attempt to measure
- the influence of information release to the market on returns in days other than at announcement.
 - if the market is at least semi-strong efficient.
 - whether there is a significant reaction to public announcements.
 - All of the above.
 - None of the above.
24. Wilbert's Clothing Stores just paid a \$1.20 annual dividend. The company has a policy whereby the dividend increases by 3% annually. You would like to purchase 100 shares of stock in this firm but realize that you will not have the funds to do so for another three years. If you desire a 11% rate of return, how much should you expect to pay for 100 shares when you can afford to buy this stock (that is, what is the estimated market price for 100 shares of this stock at the beginning of the fourth year)? Ignore trading costs.
- \$1,640

- b. \$1,688
- c. \$1,723
- d. \$1,766
- e. \$1,929

25. You can realize the same value as that derived from stock ownership if you:
- a. sell a put option and invest at the risk-free rate of return.
 - b. buy a call option and write a put option on a stock and also lend out funds at the risk-free rate.
 - c. sell a put and buy a call on a stock as well as invest at the risk-free rate of return.
 - d. lend out funds at the risk-free rate of return and sell a put option on the stock.
 - e. borrow funds at the risk-free rate of return and invest the proceeds in equivalent amounts of put and call options.
26. The value of a call increases when:
- I. the time to expiration increases.
 - II. the stock price increases.
 - III. the risk-free rate of return increases.
 - IV. the volatility of the price of the underlying stock increases.
- a. I and III only
 - b. II, III, and IV only
 - c. I, III, and IV only
 - d. I, II, and III only
 - e. I, II, III, and IV
27. The TrunkLine Company will earn \$60 in one year if it does well. The debtholders are promised payments of \$35 in one year if the firm does well. If the firm does poorly, expected earnings in one year will be \$30 and the repayment will be \$20 because of the dead weight cost of bankruptcy. The probability of the firm performing poorly or well is 50%. If bondholders are fully aware of these costs what will they pay for the debt? The interest rate on the bonds is 10%.
- a. \$25.00
 - b. \$27.50
 - c. \$29.55
 - d. \$32.50
 - e. \$35.00
28. Under the concept of an efficient market, a random walk in stock prices means that
- a. there is no driving force behind price changes.
 - b. technical analysts can predict future price movements to earn excess returns.
 - c. the unexplained portion of price change in one period is unrelated to the unexplained portion of price change in any other period.
 - d. the unexplained portion of price change in one period that can not be explained by expected return can only be explained by the unexplained portion of price change in a prior period.
 - e. None of the above.
29. The excess return you earn by moving from a relatively risk-free investment to a risky investment is called the:

- a. geometric average return.
 - b. inflation premium.
 - c. risk premium.
 - d. time premium.
 - e. arithmetic average return.
30. The effect of financial leverage depends on the operating earnings of the company. Which of the following is not true?
- a. Below the indifference or break-even point in EBIT the non-levered structure is superior.
 - b. Financial leverage increases the slope of the EPS line.
 - c. Above the indifference or break-even point the increase in EPS for all equity plans is less than debt-equity plans.
 - d. Above the indifference or break-even point the increase in EPS for all equity plans is greater than debt-equity plans.
 - e. The rate of return on operating assets is unaffected by leverage.
31. An unlevered firm has a cost of capital of 14% and earnings before interest and taxes of \$150,000. A levered firm with the same operations and assets has both a book value and a face value of debt of \$700,000 with a 7% annual coupon. The applicable tax rate is 35%. What is the value of the levered firm?
- a. \$696,429
 - b. \$907,679
 - c. \$941,429
 - d. \$1,184,929
 - e. \$1,396,429
32. The quick ratio is measured as:
- a. current assets divided by current liabilities.
 - b. cash on hand plus current liabilities, divided by current assets.
 - c. current liabilities divided by current assets, plus inventory.
 - d. current assets minus inventory, divided by current liabilities.
 - e. current assets minus inventory minus current liabilities.
33. The prices for IMB over the last 3 years are given below. Assuming no dividends were paid, what was the 3-year holding period return? Given the following information: Year 1 return = 10%, Year 2 return = 15%, Year 3 return = 12%.
- a. 12.3%
 - b. 13.9%
 - c. 15.8%
 - d. 41.7%
 - e. 46.5%
34. The Modigliani-Miller Proposition I without taxes states
- a. A firm cannot change the total value of its outstanding securities by changing its capital structure proportions.
 - b. When new projects are added to the firm the firm value is the sum of the old value plus the new.
 - c. Managers can make correct corporate decisions that will satisfy all shareholders if they select

- projects that maximize value.
- d. the determination of value must consider the timing and risk of the cash flows.
 - e. None of the above.
35. The profitability index is closely related to:
- a. payback.
 - b. discounted payback.
 - c. the average accounting return.
 - d. net present value.
 - e. mutually exclusive projects.
36. The pecking order states how financing should be raised. In order to avoid asymmetric information problems and misinterpretation of whether management is sending a signal on security overvaluation the firm's first rule is to
- a. finance with internally generated funds.
 - b. always issue debt then the market won't know when management thinks the security is overvalued.
 - c. issue new equity first.
 - d. issue debt first.
 - e. None of the above.
37. Which one of the following is an example of systematic risk?
- a. the price of lumber declines sharply
 - b. airline pilots go on strike
 - c. the Federal Reserve increases interest rates
 - d. a hurricane hits a tourist destination
 - e. people become diet conscious and avoid fast food restaurants
38. Phil's Carvings, Inc. wants to have a weighted average cost of capital of 9 percent. The firm has an after-tax cost of debt of 5 percent and a cost of equity of 11 percent. What debt-equity ratio is needed for the firm to achieve their targeted weighted average cost of capital?
- a. .33
 - b. .40
 - c. .50
 - d. .60
 - e. .67
39. Suppose that firms with unexpectedly high earnings earn abnormally high returns for several months after the announcement. This would be evidence of
- a. efficient markets in the weak form.
 - b. inefficient markets in the weak form.
 - c. efficient markets in the semi-strong form.
 - d. inefficient markets in the semi-strong form.
 - e. inefficient markets in the strong form.
40. Your firm has a debt-equity ratio of .60. Your cost of equity is 11 % and your after-tax cost of debt is 7 %. What will your cost of equity be if the target capital structure becomes a fifty percent to fifty percent mix of debt and equity?

-
- a. 9.50 %
b. 10.50 %
c. 11.00 %
d. 11.25 %
e. 12.00 %
41. The Zolo Co. just declared that they are increasing their annual dividend from \$1.00 per share to \$1.25 per share. If the stock price remains constant, then:
a. the capital gains yield will decrease.
b. the capital gains yield will increase.
c. the dividend yield will increase.
d. the dividend yield will also remain constant.
e. neither the capital gains yield nor the dividend yield will change.
42. The Fisher Effect primarily emphasizes the effects of _____ risk on an investor's rate of return.
a. default
b. market
c. interest rate
d. inflation
e. maturity
43. Insider trading does not offer any advantages if the financial markets are:
a. weak form efficient.
b. semiweak-form efficient.
c. semistrong-form efficient.
d. strong-form efficient.
e. inefficient.
44. The characteristic line is graphically depicted as
a. the plot of the relationship between beta and expected return.
b. the plot of the returns of the security against the beta.
c. the plot of the security returns against the market index returns.
d. the plot of the beta against the market index returns.
e. None of the above.
45. If a stock portfolio is well diversified, then the portfolio variance:
a. will equal the variance of the most volatile stock in the portfolio.
b. may be less than the variance of the least risky stock in the portfolio.
c. must be equal to or greater than the variance of the least risky stock in the portfolio.
d. will be a weighted average of the variances of the individual securities in the portfolio.
e. will be an arithmetic average of the variance of the individual securities in the portfolio.
46. The MM theory with taxes implies that firms should issue maximum debt. In practice, this is not true because
a. debt is more risky than equity.
b. bankruptcy is a disadvantage to debt.
c. firms will incur large agency costs of short term debt by issuing long term debt.
d. Both A and B.

- e. Both B and C.
47. The total interest paid on a zero-coupon bond is equal to:
- zero.
 - the face value minus the issue price.
 - the face value minus the market price on the maturity date.
 - \$1,000 minus the face value.
 - \$1,000 minus the par value.
48. You are trying to determine whether to accept project A or project B. These projects are mutually exclusive. As part of your analysis, you should compute the incremented IRR by determining:
- the internal rate of return for the cash flows of each project.
 - the net present value of each project using the internal rate of return as the discount rate.
 - the discount rate that equates the discounted payback periods for each project.
 - the discount rate that makes the net present value of each project equal to 1.
 - the internal rate of return for the differences in the cash flows of the two projects.
49. Studies of the performance of professionally managed mutual funds find that these funds
- do not outperform a market index. Assuming mutual fund managers rely primarily on public information; this finding refutes the semi-strong form of the efficient market hypothesis.
 - do not outperform a market index. Assuming mutual fund managers rely primarily on public information; this finding supports the semi-strong form of the efficient market hypothesis.
 - outperform a market index. Assuming mutual fund managers rely primarily on public information; this finding refutes the semi-strong form of the efficient market hypothesis.
 - outperform a market index. Assuming mutual fund managers rely primarily on public information; this finding supports the semi-strong form of the efficient market hypothesis.
 - Both C and D.
50. Which of the following statements are correct in relation to M&M Proposition II with -no taxes?
- The return on assets is equal to the weighted average cost of capital.
 - Financial risk is determined by the debt-equity ratio.
 - Financial risk determines the return on assets.
 - The cost of equity declines when the amount of leverage used by a firm rises.
- I and III only
 - II and IV only
 - I and II only
 - III and IV only
 - I and IV only