CUHK Business School
The Chinese University of Hong Kong

Financial Management

FINA 2010 K/M, Semester II, 2020-2021

Final Exam (Open Book and Online)

7 pm to 9 pm, 19 April, 2021

Multiple-Choice Questions

1. A sinking fund is managed by a trustee for which one of the following purposes?

A. paying interest payments

B. early bond redemption

C. converting bonds into equity securities

D. paying preferred dividends

2. Which of the following increase the price sensitivity of a bond to changes in interest rates?

I. increase in time to maturity

II. decrease in time to maturity

III. increase in coupon rate

IV. decrease in coupon rate

A. II only

B. I and III only

C. I and IV only

D. II and III only

3. Which of the following statements is correct concerning the term structure of interest rates?

I. Expectations of lower inflation rates in the future tend to lower the slope of the term structure of interest rates.

II. The term structure of interest rates includes both an inflation premium and an interest rate risk premium.

III. The real rate of return has minimal, if any, affect on the slope of the term structure of interest rates.

IV. The term structure of interest rates and the time to maturity are always directly related.

A. I and II only

B. II and IV only

C. I, II, and III only

D. II, III, and IV only

4. The yield-to-maturity on a bond is the interest rate you earn on your investment if interest rates do not change. If you actually sell the bond before it matures, your realized return is known as the holding period yield. Suppose that today, you buy a 12 percent annual coupon bond for $1,000. The bond has 13 years to maturity. Two years from now, the yield-to-maturity has declined to 11 percent and you decide to sell. What is your holding period yield?

A. 8.84 percent

B. 9.49 percent

C. 12.00 percent

D. 14.89 percent

5. You want to have $1.04 million in real dollars in an account when you retire in 46 years. The nominal return on your investment is 8 percent and the inflation rate is 3.5 percent. What is the real amount you must deposit each year to achieve your goal?

A. $6,667.67

B. $6,878.49

C. $7,433.02

D. $7,515.09

6. You purchase a bond with an invoice price of $1,460. The bond has a coupon rate of 9.4 percent, and there are 3 months to the next semiannual coupon date. What is the clean price of this bond?

A. $1,436.50

B. $1,452.17

C. \$1,460.00

D. \$1,467.83

7. Technical Sales, Inc. has 6.6 percent coupon bonds on the market with 9 years left to maturity. The bonds make semiannual payments and currently sell for 88.79 percent of par. What is the effective annual yield?

A. 8.34 percent

B. 8.40 percent

C. 8.52 percent

D. 8.58 percent

8. A Treasury bond is quoted at a price of 106:23 with a 3.50 percent coupon. The bond pays interest semiannually. What is the current yield on one of these bonds?

A. 3.06 percent

B. 3.19 percent

C. 3.28 percent

D. 3.33 percent

9. Which of the following are negative covenants that might be found in a bond indenture?

I. The company shall maintain a current ratio of 1.10 or better.

II. No debt senior to this issue can be issued.

III. The company cannot lease any major assets without approval by the lender.

IV. The company must maintain the loan collateral in good working order.

A. I and II only

B. II and III only

C. III and IV only

D. II, III, and IV only

10. A 6 percent, annual coupon bond is currently selling at a premium and matures in 7 years. The bond was originally issued 3 years ago at par. Which one of the following statements is accurate in respect to

this bond today?

A. The face value of the bond today is greater than it was when the bond was issued.

B. The bond is worth less today than when it was issued.

C. The yield-to-maturity is less than the coupon rate.

D. The coupon rate is greater than the current yield.

11. You expect interest rates to decline in the near future even though the bond market is not indicating any sign of this change. Which one of the following bonds should you purchase now to maximize your gains if the rate decline does occur?

A. short-term; low coupon

B. short-term; high coupon

C. long-term; zero coupon

D. long-term; low coupon

12. An increase in which of the following will increase the current value of a stock according to the dividend growth model?

I. dividend amount

II. number of future dividends, provided the current number is less than infinite

III. discount rate

IV. dividend growth rate

A. I and II only

B. III and IV only

C. I, II, and III only

D. I, II, and IV only

13. Winston Co. has a dividend-paying stock with a total return for the year of -6.5 percent. Which one of the following must be true?

A. The dividend must be constant.

B. The stock has a negative capital gains yield.

C. The dividend yield must be zero.

D. The required rate of return for this stock increased over the year.

14. Jen owns 30 shares of stock in Delta Fashions and wants to win a seat on the board of directors. The firm has a total of 100 shares of stock outstanding. Each share receives one vote. Presently, the company is voting to elect three new directors. Which one of the following statements must be true given this information?

A. Regardless of the voting procedure, Jen does not own enough shares to gain a seat on the board.

B. If straight voting applies, Jen is assured a seat on the board.

C. If straight voting applies, Jen can control all of the open seats.

D. If cumulative voting applies, Jen is assured one seat on the board.

15. You own 600 shares of a NASDAQ listed stock that you wish to sell. Which of the following are options available to you for this purpose?

I. sell the shares to a dealer at the dealer's bid price

II. sell directly to another individual via an ECN

III. offer the shares yourself on NASDAQ via an ECN

IV. have a broker offer the shares for sale on the NYSE

A. I and II only

B. III and IV only

C. II and III only

D. I, II, and III only

16. Harvey County Choppers, Inc. is experiencing rapid growth. The company expects dividends to grow at 25 percent per year for the next 7 years before leveling off to 7 percent into perpetuity. The required return on the stock is 12 percent. What is the current stock price if the annual dividend share that was just paid was $1.05?

A. $60.15

B. $64.36

C. $67.37

D. $72.11

17. Bechtel Machinery stock currently sells for $50 per share. The market requires a 15 percent return on the firm's stock. The company maintains a constant 8 percent growth rate in dividends. What was the most recent annual dividend per share paid on this stock?

A. $3.00

B. $3.24

C. $3.50

D. $3.67

18. Whistle Stop Trains pays a constant $16 dividend on its stock. The company will maintain this dividend for the next 14 years and will then cease paying dividends forever. What is the current price per share if the required return on this stock is 15 percent?

A. $77.78

B. $82.48

C. $91.59

D. $106.67

19. Electronics, Inc. common stock returned a nifty 22.68 percent rate of return last year. The dividend amount was $0.25 a share which equated to a dividend yield of 0.84 percent. What was the rate of price appreciation for the year?

A. 21.84 percent

B. 22.38 percent

C. 22.60 percent

D. 22.87 percent

20. Which one of these statements related to preferred stock is correct?

A. Preferred shareholders normally receive one vote per share of stock owned.

B. Preferred shareholders determine the outcome of any election that involves a proxy fight.

C. Preferred shareholders are considered to be the residual owners of a corporation.

D. Cumulative preferred shares are more valuable than comparable non-cumulative shares.

21. Boston Free Press has a dividend policy whereby the firm pays a constant annual dividend of $2.40 per share of common stock. The firm has 1,000 shares of stock outstanding. The company:

A. must always show a current liability of $2,400, ($2.40 × 1,000), for dividends payable.

B. must still declare each dividend before it becomes an actual company liability.

C. is obligated to pay $2.40 per share each year in perpetuity.

D. will be declared in default if it does not pay at least $2.40 per share per year on a timely basis.

22. Which one of the following statements is correct concerning the two-stage dividend growth model?

A. G_1 cannot be negative.

B. G_1 must be greater than G_2.

C. G_1 can be greater than R.

D. R must be less than G_1 but greater than G_2.

23. Which one of the following statements best defines the efficient market hypothesis?

A. Efficient markets limit competition.

B. Security prices in efficient markets remain steady as new information becomes available.

C. Mispriced securities are common in efficient markets.

D. All securities in an efficient market are zero net present value investments.

24. Which of the following statements is correct in relation to a stock investment?

I. The capital gains yield can be positive, negative, or zero.

II. The dividend yield can be positive, negative, or zero.

III. The total return can be positive, negative, or zero.

IV. Neither the dividend yield nor the total return can be negative.

A. I only

B. I and II only

C. I and III only

D. I and IV only

25. Estimates of the rate of return on a security based on a historical arithmetic average will probably tend to _____ the expected return for the long-term while estimates using the historical geometric average will probably tend to _____ the expected return for the short-term.

A. overestimate; overestimate

B. overestimate; underestimate

C. underestimate; overestimate

D. underestimate; underestimate

26. A stock had the following prices and dividends. What is the geometric average return on this stock?

Year	Price	Dividend
1	$16.40	–
2	$16.62	$0.50
3	$15.48	$0.50
4	$9.15	$0.25

A. -15.87 percent

B. -15.21 percent

C. -13.33 percent

D. -12.91 percent

27. Over the past fifteen years, the common stock of The Flower Shoppe, Inc. has produced an arithmetic average return of 12.2 percent and a geometric average return of 11.5 percent. What is the projected return on this stock for the next five years according to Blume's formula?

A. 11.70 percent

B. 11.89 percent

C. 12.00 percent

D. 12.03 percent

28. A stock had returns of 15 percent, 8 percent, 12 percent, -21 percent, and -4 percent for the past five years. Based on these returns, what is the approximate probability that this stock will return at least 15 percent in any one given year?

A. less than 0.5 percent

B. greater than 0.5 percent but less than 1.0 percent

C. greater than 1.0 percent but less than 2.5 percent

D. greater than 16.0 percent

29. What is the amount of the excess return on a U.S. Treasury bill if the risk-free rate is 2.8 percent and the market rate of return is 8.35 percent?

A. 0.00 percent

B. 2.80 percent

C. 5.55 percent

D. 8.35 percent

30. Today, you sold 200 shares of Indian River Produce stock. Your total return on these shares is 5.65 percent. You purchased the shares one year ago at a price of $31.10 a share. You have received a total of $100 in dividends over the course of the year. What is your capital gains yield on this investment?

A. 3.68 percent

B. 4.04 percent

C. 5.67 percent

D. 7.26 percent

31. According to theory, studying historical stock price movements to identify mispriced stocks:

A. is effective as long as the market is only semistrong form efficient.

B. is effective provided the market is only weak form efficient.

C. is ineffective even when the market is only weak form efficient.

D. becomes ineffective as soon as the market gains semistrong form efficiency.

32. Stacy purchased a stock last year and sold it today for $3 a share more than her purchase price. She received a total of $0.75 in dividends. Which one of the following statements is correct in relation to this investment?

A. The dividend yield is expressed as a percentage of the selling price.

B. The capital gain would have been less had Stacy not received the dividends.

C. The total dollar return per share is $3.

D. The capital gains yield is positive.

33. The expected return on a portfolio:

I. can never exceed the expected return of the best performing security in the portfolio.

II. must be equal to or greater than the expected return of the worst performing security in the portfolio.

III. is independent of the unsystematic risks of the individual securities held in the portfolio.

IV. is independent of the allocation of the portfolio amongst individual securities.

A. I and III only

B. II and IV only

C. I and II only

D. I, II, and III only

34. At a minimum, which of the following would you need to know to estimate the amount of additional reward you will receive for purchasing a risky asset instead of a risk-free asset?

I. asset's standard deviation

II. asset's beta

III. risk-free rate of return

IV. market risk premium

A. I and III only

B. II and IV only

C. III and IV only

D. I, III, and IV only

35. A stock with an actual return that lies above the security market line has:

A. more systematic risk than the overall market.

B. more risk than that warranted by CAPM.

C. a higher return than expected for the level of risk assumed.

D. less systematic risk than the overall market.

36. You want your portfolio beta to be 0.95. Currently, your portfolio consists of $4,000 invested in stock A with a beta of 1.47 and $3,000 in stock B with a beta of 0.54. You have another $9,000 to invest and want to divide it between an asset with a beta of 1.74 and a risk-free asset. How much should you invest in the risk-free asset?

A. $4,316.08

B. $4,425.29

C. $4,902.29

D. $4,574.71

37. Suppose you observe the following situation:

State of Economy	Probability of State of Economy	Rate of Return if State Occurs	
		Stock A	Stock B
Bust	0.22	-0.12	-0.27
Normal	0.48	0.10	0.05
Boom	0.30	0.23	0.28

Assume the capital asset pricing model holds and stock A's beta is greater than stock B's beta by 0.21. What is the expected market risk premium?

A. 9.5 percent

B. 12.6 percent

C. 17.9 percent

D. 20.0 percent

38. Suppose you observe the following situation:

Security	Beta	Expected Return
Pete Corp.	0.8	0.12
Repete Corp.	1.1	0.16

Assume these securities are correctly priced. Based on the CAPM, what is the return on the market?

A. 13.99 percent

B. 14.42 percent

C. 14.67 percent

D. 14.78 percent

39. What is the expected return of an equally weighted portfolio comprised of the following three stocks?

State of Economy	Probability of State of Economy	Rate of Return if State Occurs		
		Stock A	Stock B	Stock C
Boom	0.64	0.19	0.13	0.31
Bust	0.36	.15	0.11	0.17

A. 16.33 percent

B. 18.60 percent

C. 19.67 percent

D. 20.48 percent

40. What is the standard deviation of the returns on a portfolio that is invested in stocks A, B, and C? Twenty five percent of the portfolio is invested in stock A and 40 percent is invested in stock C.

State of Economy	Probability of State of Economy	Returns if State Occurs		
		Stock A	Stock B	Stock C
Boom	5%	17%	6%	22%
Normal	55%	8%	10%	15%
Recession	40%	-3%	19%	-25%

A. 6.31 percent

B. 6.49 percent

C. 7.40 percent

D. 7.83 percent

41. Which one of the following should earn the most risk premium based on CAPM?

A. diversified portfolio with returns similar to the overall market

B. stock with a beta of 1.38

C. stock with a beta of 0.74

D. U.S. Treasury bill

42. The reward-to-risk ratio for stock A is less than the reward-to-risk ratio of stock B. Stock A has a beta of 0.82 and stock B has a beta of 1.29. This information implies that:
A. stock A is riskier than stock B and both stocks are fairly priced.
B. stock A is less risky than stock B and both stocks are fairly priced.
C. either stock A is underpriced or stock B is overpriced or both.
D. either stock A is overpriced or stock B is underpriced or both.

43. The primary purpose of portfolio diversification is to:
A. increase returns and risks.
B. eliminate all risks.
C. eliminate asset-specific risk.
D. eliminate systematic risk.

44. Which of the following are examples of diversifiable risk?
I. earthquake damages an entire town
II. federal government imposes a $100 fee on all business entities
III. employment taxes increase nationally
IV. toymakers are required to improve their safety standards
A. I and III only
B. II and IV only
C. II and III only
D. I and IV only

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.

46. AA Tours is comparing two capital structures to determine how to best finance its operations. The first option consists of all equity financing. The second option is based on a debt-equity ratio of 0.45. What should AA Tours do if its expected earnings before interest and taxes (EBIT) are less than the break-even level? Assume there are no taxes.

A. select the leverage option because the debt-equity ratio is less than 0.50

B. select the leverage option since the expected EBIT is less than the break-even level

C. select the unlevered option since the debt-equity ratio is less than 0.50

D. select the unlevered option since the expected EBIT is less than the break-even level

47. Which of the following statements are correct in relation to M&M Proposition II with no taxes?

I. The required return on assets is equal to the weighted average cost of capital.

II. Financial risk is determined by the debt-equity ratio.

III. Financial risk determines the return on assets.

IV. The cost of equity declines when the amount of leverage used by a firm rises.

A. I and III only

B. II and IV only

C. I and II only

D. III and IV only

48. The Corner Bakery has a debt-equity ratio of 0.54. The firm's required return on assets is 14.2 percent and its cost of equity is 16.1 percent. What is the pre-tax cost of debt based on M&M Proposition II with no taxes?

A. 7.10 percent

B. 8.79 percent

C. 10.68 percent

D. 17.56 percent

49. Down Bedding has an unlevered cost of capital of 13 percent, a cost of debt of 7.8 percent, and a tax rate of 32 percent. What is the target debt-equity ratio if the targeted cost of equity is 15.51 percent?

A. .63

B. .68

C. .71

D. .76

50. Country Markets has an unlevered cost of capital of 12 percent, a tax rate of 38 percent, and expected earnings before interest and taxes of $15,700. The company has $11,000 in bonds outstanding that have a 6 percent coupon and pay interest annually. The bonds are selling at par value. What is the cost of equity?

A. 12.55 percent

B. 13.36 percent

C. 13.64 percent

D. 14.07 percent

51. Percy's Wholesale Supply has earnings before interest and taxes of $106,000. Both the book and the market value of debt is $170,000. The unlevered cost of equity is 15.5 percent while the pre-tax cost of debt is 8.6 percent. The tax rate is 38 percent. What is the firm's weighted average cost of capital?

A. 11.94 percent

B. 12.65 percent

C. 13.45 percent

D. 14.01 percent

52. New Schools, Inc. expects an EBIT of $7,000 every year forever. The firm currently has no debt, and its cost of equity is 17 percent. The firm can borrow at 8 percent and the corporate tax rate is 34 percent. What will the value of the firm be if it converts to 50 percent debt?

A. $29,871.17

B. $31,796.47

C. $32,407.16

D. $34,552.08

53. W.V. Trees, Inc. has a debt-equity ratio of 1.4. Its WACC is 10 percent, and its cost of debt is 9 percent. The corporate tax rate is 33 percent. What is the firm's unlevered cost of equity capital?

A. 12.38 percent

B. 12.79 percent

C. 13.68 percent

D. 14.10 percent

54. The SLG Corp. uses no debt. The weighted average cost of capital is 12 percent. The current market value of the equity is $31 million and the corporate tax rate is 34 percent. What is EBIT?

A. $4,180,000

B. $4,821,194

C. $5,636,364

D. $6,230,018

55. Georga's Restaurants has 4,500 bonds outstanding with a face value of $1,000 each and a coupon rate of 8.25 percent. The interest is paid semi-annually. What is the amount of the annual interest tax shield if the tax rate is 37 percent?

A. $137,362.50

B. $162,411.90

C. $187,750.00

D. $210,420.00

56. Bob's Warehouse has a pre-tax cost of debt of 8.4 percent and an unlevered cost of capital of 14.6 percent. The firm's tax rate is 37 percent and the cost of equity is 18 percent. What is the firm's debt-equity ratio?

A. 0.72

B. 0.76

C. 0.79

D. 0.87

57. Bright Morning Foods has expected earnings before interest and taxes of $48,600, an unlevered cost of capital of 13.2 percent, and debt with both a book and face value of $25,000. The debt has an 8.5 percent coupon. The tax rate is 34 percent. What is the value of the firm?

A. $245,500

B. $247,600

C. $251,500

D. $264,800

58. Which of the following are correct according to pecking-order theory?

I. Firms stockpile internally-generated cash.

II. There is an inverse relationship between a firm's profit level and its debt level.

III. Firms avoid external debt at all costs.

IV. A firm's capital structure is dictated by its need for external financing.

A. I and III only

B. II and IV only

C. I, III, and IV only

D. I, II, and IV only

59. Jessica invested in Quantro stock when the firm was unlevered. Since then, Quantro has changed its capital structure and now has a debt-equity ratio of 0.30. To unlever her position, Jessica needs to:

A. borrow some money and purchase additional shares of Quantro stock.

B. maintain her current equity position as the debt of the firm did not affect her personally.

C. sell some shares of Quantro stock and hold the proceeds in cash.

D. sell some shares of Quantro stock and loan out the sale proceeds.

60. Which one of the following states that a firm's cost of equity capital is directly and proportionally related to the firm's capital structure?

A. Capital Asset Pricing Model

B. M&M Proposition I

C. M&M Proposition II

D. Efficient Markets Hypothesis