國立中正大學
111 學年度碩士班招生考試
試 題
[第 1 節]

科目名稱	財務管理
系所組別	財務金融學系

—作答注意事項—

※作答前請先核對「試題」、「試卷」與「准考證」之系所組別、科目名稱是否相符。

1. 預備鈴響時即可入場，但至考試開始鈴響前，不得翻閱試題，並不得書寫、畫記、作答。
2. 考試開始鈴響時，即可開始作答；考試結束鈴響畢，應即停止作答。
3. 入場後於考試開始 40 分鐘內不得離場。
4. 全部答題均須在試卷（答案卷）作答區內完成。
5. 試卷作答限用藍色或黑色筆（含鉛筆）書寫。
6. 試題須隨試卷繳還。

Part A. Multiple Choice Questions (75 points, 3 points for each question. Please select the best answer.)

1. Shareholders sometimes engage in strategies such as taking large risks or paying excessive dividends to maximize their own utility. These actions generally result in:

A. no action by debtholders since these are shareholder concerns.
B. agency costs to bondholders.
C. undertaking scale-enhancing projects.
D. lower agency costs, as shareholders have more control over the firm's assets.

2. The free cash flow hypothesis suggests that firms

A. with greater free cash flow will pay more in dividends, thereby reducing the risk of financial distress.
B. with greater free cash flow should issue new equity to reduce the wasting of resources by managers.
C. issuing debt need to pay interest and principal, thereby reducing the waste of resources.
D. that firms with higher levels of free cash flow should reduce their debt levels.

3. Event studies attempt to explore: ____

A. the influence of information released to the market on stock prices in days surrounding the information's release.
B. whether the market is semi-strong or strong form efficient.
C. the correlation between the returns on two diverse securities.
D. the optimal time to release new information to the public.

4. All else being equal, which one of these would increase the WACC of a leveraged firm?

A. an increase in the weight of debt B. a decrease in a firm's equity beta
C. a decrease in the dividend growth rate D. a decrease in the tax rate

5. CCU Co. has an asset beta of 0.57, the risk-free rate is 4.3%, and the market risk premium is 7.7%. What is the equity beta if the firm has a debt-equity ratio of 0.56?

A. 0.46 B. 0.89 C. 0.74 D. 0.37

6. The discount rate should be used to discount the cash flows of a levered firm is:

A. (roe – growth rate). B. the average of the DDM and CAPM costs of equity.
C. (1 + WACC) X Tax Rate. D. (1 + CAPM) X Tax Rate.

7. Suppose CCU's common stock has a factor beta of 0.8 of a 1-factor APT model, the risk-free rate is 3.2%, and the expected market return is 11.2%. What is the expected return for CCU stock?

A. 10.25% B. 6.40% C. 7.20% D. 9.60%

8. CCU-Tech is expecting an intense growth and has decided to reduce its annual dividend by 10% a year for the next two years. After that, it will maintain a constant dividend of $0.70 a share. Last year, the company paid $1.80 per share. What is the value of this stock if the required rate of return is 13%?
A. $6.99　　B. $6.79　　C. $8.22　　D. $8.87

9. If a bond's yield to maturity is less than its coupon rate, it will sell at a ______, and increases in market interest rates will:
A. discount; decrease this discount.　　B. discount; increase this discount.
C. premium; decrease this premium.　　D. premium; increase this premium.

10. Which one of the following statements is true?
A. Both APT and CAPM argue that expected excess return must be proportional to the beta(s).
B. Both CAPM and APT are empirical models.
C. CAPM provides the means for a more-detailed estimate of a security's expected return than does APT.
D. CAPM assigns a beta of 1 to the market while APT assigns the market a beta of zero.

11. Which one of the following is a reasonable argument for a high dividend payout policy?
A. high personal tax rates relative to corporate rates
B. desire to maintain constant dividends over time
C. restrictive covenant contained in a bond indenture agreement
D. agency costs related to excess cash reserves

12. An industry is likely to have a low beta if the:
A. industry tends to use a lot of debt financing.
B. stream of revenues within that industry is less volatile than the market.
C. economy is in recession.
D. demand for its goods is highly affected by the business cycle.

13. A dividend increase generally signals that:
A. future dividends will be lower.
B. the firm has several net present value projects to pursue.
C. management believes the future earnings of the firm will be strong.
D. the firm has more cash than it needs due to sales declines.

14. The option to wait:
A. increases in value as the project's sensitivity to new technology increases.
B. is independent of the project's discount rate.
C. is valueless when a project is profitable given immediate implementation.
D. may have value even if a project currently does not.

15. Which of the following statements is FALSE?
A. Statistically, we use the standard error of the estimate to measure the degree of estimation error
B. When focusing on the returns of a single security, it's common to assume that dividends are immediately reinvested at a risk-free rate.
C. We estimate the standard deviation or volatility as the square root of the variance.
D. The covariance between market returns and firm stock returns is strongly correlated with firm beta.

16. Which of the following statements is FALSE?
A. Stock returns will tend to move together if they are affected similarly by economic events.
B. Stocks in the same industry tend to have more highly correlated returns than stocks in different industries.
C. Almost all of the correlations between stocks are negative, which is the source of portfolio diversification.
D. Without short-selling, when the stocks in your portfolio move more together, the volatility of your portfolio return would be higher.

17. A firm has a beta of 1.2. The risk-free rate is 2.9%, and the expected market return is 11.4%. What is the firm's cost of equity?
A. 13.1% B. 10.8% C. 12.8% D. 14.4%

18. Which of the following statements is FALSE?
A. Zero-coupon bonds are also called pure discount bonds.
B. The IRR of an investment opportunity is the discount rate at which the NPV of the investment opportunity is equal to zero.
C. The yield to maturity for a zero-coupon bond is the return you will earn as an investor from holding the bond to maturity and receiving the promised face value payment.
D. Bonds with longer maturity are more diversified across time. So their price are less sensitive to the change of discount rate.

19. Which of the following statements is FALSE?
A. The risk of bankruptcy is one of the most important concerns when making leverage decisions.
B. Whether default occurs depends on the cash flows, not on the leverage ratio.
C. Economic distress is a significant decline in the value of a firm's assets, whether or not it experiences financial distress due to leverage.
D. Modigliani and Miller's results continue to hold in a perfect market even when debt is risky and the firm may default.

20. Which of the following statements about the IRR investment rule is FALSE?
A. you should reject an investment opportunity when the IRR is less than the cost of capital.
B. projects with IRR that exceeds the opportunity cost of capital can always increase shareholder wealth.
C. Since the IRR rule is based upon the rate at which the NPV equals zero, like the NPV decision rule, the IRR decision rule will always identify the correct investment decisions.
D. There are situations in which multiple IRRs exist.

21. The company bond of CCU pays an 8% coupon annually with 20 years to maturity. The percentage change in the price of the bond if its yield to maturity increases from 5% to 7% is closest to:
A. 22% B. 24% C. -22% D. -24%

22. Which of the following statements is FALSE?
A. The dividend discount model is a proper choice to value the stock of a firm with rapid growth.
B. As firms mature, their growth slows to rates more typical of large and stable companies.
C. The dividend discount model values the stock based on a forecast of future dividends.
D. The simplest forecast for the firm's future dividends states that they will grow at a constant rate.

23. Which of the following statements is FALSE?
A. To estimate a firm's enterprise value, we compute the present value of the free cash flows (FCF) that the firm has available to pay equity holders.
B. The NPV of any individual project represents its contribution to the firm's enterprise value.
C. When using the total payout model, we discount total dividends and share repurchases and use the growth rate in earnings when forecasting the growth of the firm's payout.
D. In the total payout model, we first value the firm's total equity rather than just a single share.

24. Which of the following statements is FALSE?
A. If some security were not part of the efficient portfolio, then every investor would not want to own it, and the shape ratio of this security would decrease.
B. The efficient portfolio must be the same portfolio as the market portfolio of all risky securities.

C. Because every security is owned by someone, the sum of all investors' portfolios must equal the portfolio of all risky securities available in the market.
D. If all investors demand an efficient portfolio, and since the supply of securities is the market portfolio, then the market portfolio must be an efficient portfolio.

25. Which of the following statements is FALSE?
A. CAPM implies that investors should hold the market portfolio even if they are not well trained.
B. Even naive investors with no information should hold the market portfolio.
C. The CAPM assumption of homogeneous expectations is not a good description of the real world.
D. CAPM assumes that all investors have the same risk-averse level.

Part B. Problem Sets (25 Points)

1. Firm L and firm U are similar firms except that firm L uses leverage while firm U is a pure equity firm. The financial information for both firms is as:

	Firm U	Firm L
Asset	8000	8000
Debt	0	4000
Equity	8000	4000
Interest rate	10%	10%
Market value/share	20	20
Shares outstanding	400	200

a. There are three market status: Recession, Normal, Expansion, with equal probability of occurrence. The ROA would be 5%, 15%, and 25%, respectively. Please show that the EPS is more volatile for firm L than firm U. (5%)
b. Please show that investors can replicate the cash flow of firm L using firm U and homemade leverage. (8%)

2. Consider the following information (Round off to the 2nd decimal place):

Year	Risk-free Return	Market Return	CCU Bio-Tech Stock Return
2019	3.0%	6.0%	5.5%
2020	2.0%	-40.0%	-30.0%
2021	1.0%	31.0%	41.0%

a. What is the CAPM beta of CCU Bio-Tech stock? (6%)
b. Given the beta you estimated, what is the alpha of CCU-Bio Tech in 2021? (6%)