國立高雄大學 115 學年度研究所碩士班招生考試試題

科目：財務管理　　系所：財務金融學系　　是否使用計算機：是
考試時間：100 分鐘　　本科原始成績：100 分

I. Multiple Choice Questions -- Choose one alternative that best completes the statement or answers the question. (2 points each, total 80 points)
Please write down the answers on the provided answer sheet.

1) Assume you own 1,000 shares of stock in a firm for which four directors' seats are up for election. If you have been granted a total of 4,000 votes to cast in a single election, then the firm uses _____ voting.
   A) market share
   B) absolute priority
   C) proxy
   D) straight
   E) cumulative

2) When shareholders are granted preemptive rights, they obtain the right _____.
   A) of first refusal for their proportionate percentage of new shares offered
   B) to share proportionally in regular and liquidating dividends
   C) to elect members to the board of directors
   D) to receive dividends prior to any preferred shareholders
   E) to resell their shares to the issuer at any time at a predetermined price

3) According to the MM Proposition, which proposition is that the value of the levered firm equals the value of the unlevered firm?
   A) MM Proposition I with tax
   B) MM Proposition II with tax
   C) MM Proposition I with no tax
   D) MM Proposition II with no tax
   E) both MM Proposition I with tax and MM Proposition I without tax

4) The increase in risk to shareholders when financial leverage is added is best evidenced by:
   A) decreasing earnings as EBIT increases.
   B) higher EPS as EBIT increases.
   C) the increase in taxes.
   D) increased use of homemade leverage.
   E) a higher variability of EPS with partial debt financing than with all-equity financing.

5) Covenants restricting additional borrowing primarily protect the:
   A) shareholders' residual interests in the firm.
   B) debtholders from changes in market interest rates.
   C) managers by avoiding agency costs.
   D) debtholders from the added risk of dilution of their claims.
   E) shareholders from agency costs.

6) Assume a firm made a payment to its owners in the form of new shares of stock. What is the transaction called?
   A) cash dividend
   B) Stock dividend
   C) Normal dividend
   D) Special dividend
   E) Extra dividend

7) A corporation can repurchase its shares in all the following ways **except** through:
   A) a tender offer.
   B) a reverse stock split.
   C) a targeted repurchase.
   D) open market purchases.
   E) a Dutch auction.

8) When the _____ between two currencies is not _____ the ratio of the two direct rates, triangle arbitrage can occur.
   A) spot rate; equal to
   B) spot rate; less than
   C) cross-rate; equal to
   D) cross-rate; less than
   E) cross-rate; greater than

9) What kind of trade involves agreeing today on an exchange rate for settlement in 180 days?
   A) Forward trade
   B) Spot trade
   C) Market trade
   D) Triangle trade
   E) Credit trade

10) Which one of the following concepts states that real rates are equal across countries?
   A) Uncovered Interest Rate Parity
   B) Covered Interest Rate Parity
   C) Relative Purchasing Power Parity
   D) Absolute Purchasing Power Parity
   E) International Fisher Effect

11) What is the major difference between liquidation and reorganization?:
   A) Reorganization terminates all operations of the firm, while a liquidation only terminates non-profitable operations.
   B) Liquidation terminates all operations immediately, while a reorganization terminates operations over two, or more years.
   C) Liquidation deals with net working capital, while a reorganization deals with long-term liabilities.
   D) Liquidation must occur outside of bankruptcy, while a reorganization involves the bankruptcy process.
   E) Liquidation terminates all operations and a reorganization maintains the option of the firm as a going concern.

12) When a car manufacturer acquires a steel corporation, it is making a _____ acquisition.
   A) horizontal
   B) longitudinal
   C) conglomerate
   D) vertical
   E) complementary resources

13) Firms hold cash to satisfy the transaction motive. This means that cash is held to:
   A) fulfill disbursement requirements for normal operations, and balance the flow between cash inflows and outflows.
   B) fulfill disbursement requirements for normal operations only.
   C) balance the flow between cash inflows and outflows only.
   D) offset fees that would otherwise be charged by the firm’s bank.
   E) meet unexpected emergency cash needs.

14) Which one of the following actions is not a source of cash?
A) Submitting taxes to the government
B) Selling goods from inventory
C) Sales of marketable security held by the firm
D) Obtainment of a long-term loan
E) Collection of past-due accounts receivable

15) If a corporation needs to increase its cash holdings, it could:
A) increase fixed assets.
B) decrease accounts payable.
C) decrease long-term debt.
D) increase other current assets.
E) increase current liabilities.

16) Which of the following statements describes the primary difference between a forward contract and a cash transaction?
A) A forward contract provides an option, while a cash transaction is an obligation.
B) A forward contract is fulfilled at a later date, while the cash transaction is carried out immediately.
C) The price of a forward contract is decided at a later date, while a cash transaction occurs at the current spot rate.
D) A cash transaction can be reversed, but a forward contract cannot.
E) The forward contract can be negotiated, while a cash transaction cannot.

17) Which of the following bonds are the ones with the greatest potential price volatility?
A) short-term, high-coupon bonds.
B) long-term, low-coupon bonds.
C) long-term, zero-coupon bonds.
D) short-term, zero-coupon bonds.
E) short-term, low-coupon bonds.

18) Which of the following are most like Credit default swaps (CDS)?
A) inverse floaters.
B) call options on fixed assets.
C) an insurance policy.
D) an interest rate swap.
E) a delinquent loan.

19) Which of the following is least likely to affect the value of a warranty?
A) exercise price.
B) underlying stock price.
C) risk-free interest rate.
D) variance of underlying stock returns.
E) market rate of return.

20) A security issued by NUK Co. can be exchanged for a fixed number of shares of stock. This security is:
A) callable.
B) convertible.
C) protected.
D) putable.
E) inflated.

21) NUK Corporation's bonds have a face value of $1,000. Each bond can be exchanged by the bondholders for 40 shares of stock. The stock is selling for $45 per share. What is the conversion price?
A) $25.00
B) $40.00
C) $20.00
D) $30.00
E) $45.0

22) What kind of option can be exercised only on the expiration date?
A) European option
B) American option
C) Bermudian option
D) Futures
E) Australian option

23) Which of the following events will increase the value of a call option?
I. An increase in the market value of the underlying asset
II. A decrease in the market value of the underlying asset
III. An increase in the option's strike price
IV. A decrease in the option's strike price
A) I and II only
B) II only
C) II and III only
D) I and IV only
E) I only

24) What is defined as a conflict of interest between the stockholders and managers of a company?
A) legal liability
B) stockholders' liability
C) agency problem
D) corporate breakdown
E) corporate activist

25) NUK Co. has sales of $760,000 and costs of $630,000. Interest expense is $21,000 and depreciation is $48,000. The tax rate is 20 percent. What is the net income?
A) $83,930
B) $61,000
C) $46,970
D) $48,800
E) $115,970

26) Assume you need to compare a firm's costs with those of its competitors. Which of the following statements is the best way to compare costs across the industry?
A) pro forma income statements
B) pro forma balance sheets
C) common-size income statements
D) common-size balance sheets
E) statements of cash flows

27) An annuity will pay you $5,000 per year for six years. The first payment will occur at the end of Year 5. When you use the PV formula to compute the present value of the annuity, the result will be the PV as of the end of:
A) Today, Year 0.
B) Year 1.
C) Year 2.
D) Year 3.
E) Year 4.

28) Assume you borrow $12,000 for four years and you pay all of the payments as set forth in the loan's amortization schedule. How much will you still owe at the end of the four years?
A) $0
B) $3,000
C) $6,000
D) $9,000
E) $12,000

29) What is the appropriate description of the **internal rate of return** for a capital project?
A) discount rate that causes the net present value to equal zero.
B) difference between the market rate of interest and the discount rate.
C) market rate of interest less the risk-free rate.
D) minimum project acceptance rate set by management.
E) maximum rate that can be earned for a project to be accepted.

30) A project costs $24,000 and is expected to return cash flows of $8,500 per year for five years and then be worthless. What is the payback period for this project?
A) 2.8 years
B) 2.9 years
C) 1.8 years
D) 1.9 years
E) 3.0 years

31) Assume a firm uses a constant WACC to select investment projects rather than adjusting the projects for risk. If so, the firm will tend to:
A) accept profitable, low-risk projects and reject unprofitable, high-risk projects.
B) accept profitable, low-risk projects and accept unprofitable, high-risk projects.
C) reject profitable, low-risk projects and accept unprofitable, high-risk projects.
D) reject profitable, low-risk projects and reject unprofitable, high-risk projects.
E) None of the above.

32) Assume you spent $800 last week repairing your bike. Now a new problem is occurring and you are trying to decide whether to fix the bike or trade it in for a newer model. In analyzing the situation, the $800 repair expense is a(n) _____ cost.
A) opportunity
B) fixed
C) incremental
D) relevant
E) sunk

33) Which of the following is the best description of the sensitivity analysis?
A) Sensitivity analysis is conducted by holding all variables at their base level and changing the required rate of return.
B) Sensitivity analysis is conducted by changing the value of two variables to determine their interdependency.
C) Sensitivity analysis is conducted by changing the value of a single variable and computing the resulting change in the project's NPV.
D) Sensitivity analysis is conducted by assigning either the best or the worst possible value to every variable and comparing the results to the base case.
E) Sensitivity analysis is conducted by reviewing a project after implementation to determine how the actual results compare to the predicted results.

34) Which bond makes no coupon payments and is initially priced at a deep discount?
A) Treasury
B) municipal
C) floating-rate
D) junk
E) zero coupon

35) A bond with a coupon rate of 8 percent that pays interest semiannually and is priced at par. It will have a market price of _____ and interest payments in the amount of _____ each.
A) $1,008; $80
B) $1,080; $40
C) $1,080; $80
D) $1,000; $40
E) $1,000; $80

36) Edward is buying a $1,000 face value bond at a quoted price of 99.486. The bond carries a coupon rate of 7.20%, with interest paid semiannually. The yield to maturity is 7.32%. The next interest payment is 3 months from today. What is the clean price of this bond?
A) $994.86
B) $1,004.19
C) $1,013.53
D) $987.21
E) $1,000

37) How much are you willing to pay for one share of stock if the company just paid an annual dividend of $2.5, the dividend increases by 4.5% annually, and your required rate of return is 12%?
A) $28.61
B) $34.83
C) $33.33
D) $55.56
E) $20.83

38) You just sold 500 shares of Alcove stock at a price of $28 per share. Last year, you paid $30 per share to buy this stock. You received dividends totaling $1.2 per share. What are your capital gains yield and dividend yield on this investment, respectively?
A) −2.67%, 4%
B) 7.14%, 4.29%
C) -7.14%, 4.29%
D) 6.67%, 4%
E) −6.67%, 4%

39) You recently purchased a stock that is expected to earn 10.0% in a booming economy, 8.0% in a normal economy, and **lose** 4.0% in a recessionary economy. Each economic state is equally likely to occur. What is your expected rate of return on this stock?
A) 6.47%
B) 8.20%
C) 5.43%
D) 4.67%
E) 7.333%

40) What does a beta coefficient reflect in the response of a security's return?
A) the risk-free rate.
B) an unsystematic risk.
C) a systematic risk.
D) the market rate of return.
E) idiosyncratic risk.

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II. Problem-Solving and Essay Questions -- Write the word or phrase that best completes each statement or answers the question. (total 20 points)

Please write down the answers on the provided answer sheet.

1. According to Markowitz Portfolio Theory, derive the formula for the portfolio standard deviation σ_p under the Markowitz mean–variance framework. **Briefly explain how the correlation coefficient affects the portfolio risk.** (10 points)

   Consider a portfolio consisting of two risky assets, Asset A and Asset B.

   Let:

   w_A and w_B be the portfolio weights of Asset A and Asset B, respectively, with

   $$w_A + w_B = 1$$

   σ_A and σ_B be the standard deviations of returns of Asset A and Asset B

   ρ_{AB} be the correlation coefficient between the returns of Asset A and Asset B

2. The following is the information of NVIDIA Corporation's stock options. Assume the market price of NVIDIA is $190.0. Based on the call and put options, list the contract names of the options that are in the money, at the money, and out of the money, respectively. (10 points)

Calls						Put				
Contract Name	Strike	Last Price	Volume	Implied Volatility		Contract Name	Strike	Last Price	Volume	Implied Volatility
NVDAC01	182.5	8.85	4,317	0.00%		**NVDAP01**	180	0.37	11,373	12.50%
NVDAC02	185	6.6	15,624	0.00%		**NVDAP02**	182.5	0.58	9,899	6.25%
NVDAC03	187.5	4.74	12,224	0.00%		**NVDAP03**	185	0.95	26,572	6.25%
NVDAC04	190	3.11	78,131	0.00%		**NVDAP04**	187.5	1.57	17,242	3.13%
NVDAC05	192.5	1.9	104,710	3.13%		**NVDAP05**	190	2.48	44,798	0.78%
NVDAC06	195	1.07	84,877	6.25%		**NVDAP06**	192.5	3.75	31,729	0.00%
NVDAC07	197.5	0.57	32,844	6.25%		**NVDAP07**	195	5.35	5,695	0.00%
NVDAC08	200	0.27	64,181	12.50%		**NVDAP08**	197.5	7.26	809	0.00%
NVDAC09	202.5	0.15	15,712	12.50%		**NVDAP09**	200	9.6	2,128	0.00%

In the money:

At the money:

Out of the money: