

國立中山大學 107 學年度碩士暨碩士專班招生考試試題

科目名稱：財務管理【財管系碩士班丙組】

題號：443002

※本科目依簡章規定「不可以」使用計算機(混合題)

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Part 1: Single-choice questions (40 %, 2 % per question)

1	Which of the following statements is correct? (A) A new public equity issue from a company with public equity previously outstanding is called an initial public offering (IPO) (B) Underwriters get compensated for their services in issuing new securities in the form of spread. (C) Generally initial public offerings (IPOs) are overpriced [in the short term]. (D) An equity issue sold to the firm's existing stockholders is called a general cash offer.
2	Generally, managers of corporations prefer internally generated cash to finance their capital expenditures because: I) They can avoid the discipline of the financial markets II) The costs of issuing new securities are high III) The announcement of new equity issue is usually bad news for investors (A) I only (B) II only (C) II and III only (D) I, II, and III
3	The following are agency problems associated with capital budgeting except: I) increase firm's value II) perks or private benefits III) empire building IV) entrenching investments V) avoiding risks (A) I, II and V only (B) II, III and IV only (C) II, III IV and V only (D) I, II, III, IV and V
4	Which of the following statements is <u>FALSE</u> ? (A) The Law of One Price implies that leverage will not affect the total value of the firm under perfect capital market conditions. (B) In the absence of taxes or other transaction costs, the total cash flow paid out to all of a firm's security holders is equal to the total cash flow generated by the firm's assets. (C) If securities are fairly priced, then buying or selling securities has an NPV of zero and, therefore, should not change the value of a firm. (D) An investor who would like more leverage than the firm has chosen can lend and add leverage to his or her own portfolio.
5	A bond has a face value that exceeds its market price. Which of the following features currently apply to this bond? I. discounted price II. premium price III. yield-to-maturity that exceeds the coupon rate IV. yield-to-maturity that is less than the coupon rate (A) III only (B) I and III only (C) I and IV only (D) II and III only

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6 The internal rate of return:
 (A) may produce multiple rates of return when cash flows are conventional.
 (B) is best used when comparing mutually exclusive projects.
 (C) is usually used in the business world today.
 (D) is principally used to evaluate small dollar projects.

7 Consider the price paths of the following stocks over a six-month period:

Stock	January	February	March	April	May	June
1	\$25	\$25	\$21	\$26	\$22	\$24
2	\$22	\$23	\$16	\$14	\$16	\$10
3	\$32	\$22	\$23	\$30	\$35	\$20
4	\$16	\$15	\$16	\$18	\$22	\$28

Suppose that none of these stocks pay dividends and assume that John are an investor with the disposition effect and John bought each of these stocks in March. Suppose that it is currently the end of June, which stocks are John most inclined to sell?

(A) 1 only
 (B) 1 and 3 only
 (C) 2 only
 (D) 1 and 4 only

8 Which one of the following statements is correct in relation to independent projects?

(a) The internal rate of return cannot be used to determine the acceptability of a project that has financing type cash flows.
 (b) The net present value profile is upsloping for projects with both investing and financing type cash flows.
 (c) A project with financing type cash flows is acceptable if its required return exceeds the internal rate of return.
 (d) A project with investing type cash flows is acceptable if its internal rate of return exceeds the required return.
 (e) Projects with financing type cash flows are acceptable only when the internal rate of return is negative.

(A) (a), (b), and (c) only
 (B) (b), and (c) only
 (C) (c), and (d) only
 (D) (b), (c), and (e) only

9 All else constant, which one of the following will increase a firm's cost of equity if the firm computes that cost using the security market line approach? Assume the firm currently pays an annual dividend of \$2 a share and has a beta of 1.5.

(A) a reduction in the dividend amount
 (B) an increase in the dividend amount
 (C) an increase in the risk-free rate
 (D) an increase in market risk premium

10 Which of the following statements is correct?

(A) The weighted average cost of capital for a firm is the rate of return a firm must earn on its existing assets to maintain the current value of its stock.
 (B) The capital structure weights used in computing the weighted average cost of capital remain constant over time unless the firm issues new securities.
 (C) The aftertax cost of debt has a greater effect on a firm's cost of capital when the debt-equity ratio decreases.
 (D) The cost of preferred stock is computed the same as the return on an annuity.

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11	A corporate bond has a yield of 8% per year. Maturity: 10 years. Its expected rate of return per year = ? (A) $0 < E(r) < 8\%$ (B) $E(r) = 8\%$ (C) $10\% > E(r) > 8\%$ (D) $E(r) > 10\%$
12	Assuming underlying assets of the following are the same. Long a futures contract (No deposit is required) is the same as : (A) long call + long put (B) long call + short put (C) short call + short put (D) short call + long put (E) covered call + protective put. (Select the most appropriate answer).
13	下列何者並非 Black-Scholes 模型所需要知道的變數： (A) 無風險利率 (B) 股票報酬率的變異數 (C) 到期日長度 (D) 到期日的預期股價 (E) 以上變數都需知道
14	You have a long (= buying) position in stock Y. If you have an information indicating that price of Y will not change much in the future, you should take a _____ position: (A) covered call (B) protective put (C) time spread (D) money spread (E) long call .
15	(延續上一題) After you take your position as above, when would you earn a positive abnormal return ? (A) when option price reflects your information (B) when option price does not reflect your information (C) You always earn a positive abnormal return because options can reduce risk.
16	公司 Y (股價 \$50, 在外流通 10 萬股, 每年 EPS = \$4) 欲發行股票籌資 \$100 萬以投資方案 X (IRR = 10%、產生永續年金現金流入), 新股東要求報酬率 (required rate of return) 為 8%, 理論上應發行幾股 (A) Smaller than 18,000 (B) Between 18,000 and 18,999 (C) Between 19,000 and 19,999 (D) 20,000 (E) Larger than 20,000.
17	延續上一題: 如果方案 X 的 NPV 全部歸給新股東, 請問新股東的 abnormal rate of return = (A) Smaller than 0 (B) 0 (C) Between 0.01 and 0.2% (D) Between 0.21% and 0.4% (E) Larger than 0.4%
18	如果稅存在, 則在 ex-dividend day 的股票日報酬率 = $(\text{當天收盤價} + \text{股利}) / \text{昨天收盤價} - 1$ 將會 (假設當天沒有任何利多或利空之消息): (A) = 0 (B) 大於 0 (C) 小於 0
19	Under the risk-neutral method (風險中立法) to evaluate options, investors in the financial markets are actually (A) risk averse (B) risk neutral (C) risk seeking.
20	On January. 1, 匯率 USD: JPY = 1:100, USD 一年期 $R_f = 5\%$. JPY 一年期 $R_f = 1\%$. 一年後 USD: JPY = 1: 100 • X, 如果實證上存在 momentum effect of USD in this case, 則 X (A) = 1.05/1.01 (B) = 1.01/1.05 (C) 大於 1.05/1.01 (D) 小於 1.05/1.01 (E) 大於 1.01/1.05 (選擇最接近的答案)

Part 2: Questions (60 %)

1.
 - (1) What is perfectly efficient market? (3 分)
 - (2) What pattern of day-to-day change do you look in the historical prices of stock market in a perfectly efficient market? (3 分)
 - (3) If the market were perfectly efficient, would it have been possible for Warren Buffett to earn an average annual return of 22.2% between 1965 and 2003, beating the S&P 500 by 11.8% per year? (Source: Berkshire Hathaway 2003 Annual Report, Chairman's Letter to shareholders, p.2.) (4 分)

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2. Please define corporate governance and explain why it is used to monitor and control top-level managers' decisions? (5 分)

3. What is Yield Curve? What is the impact of Trump's tax cut on Yield Curve? (Please explain your answer.) (5 分)

4. The following table gives the annual returns each year for the whole stock market and treasury bills from 2010 to 2017 and supposes that the yield of treasury bills will be 2% in 2018.

Year	Stock Market Returns	Treasury Bills Yields
2010	11%	7%
2011	16%	10%
2012	20%	9%
2013	12%	4%
2014	-6%	2%
2015	-8%	3%
2016	6%	4%
2017	8%	3%
2018	?	2%

What is the rational expected return of stock market for 2018? (5 分)

5. Suppose we can sell 3,000 meals of fried chicken per year at a price of \$5 per meal. It cost us about \$3 per meal. Fixed costs for the project, including such things as rent on the production facility, will run \$1,000 per year. Furthermore, we will need to invest a total of \$10,000 in manufacturing equipment. For simplicity, we will assume that the cost will be depreciated straight-line to zero over the five year life of the project. The interest expense per year is \$500 and the project require an initial \$2,000 investment in net working capital. Finally, the tax rate is 20%. What is the NPV for the project? (We require a 10% percent return on the project.)(請說明這專案每年的現金流、NPV 計算方式以及你的決策準則)(5 分)

6. (15 分) Stock index now: $S_0 = 8000$. Risk-free rate (R_f) = 3% a year. Cash dividend yield=1%. **Multiplier**(乘數) = 2. **Deposit**(保證金)=10% of contract value. Your deposit earns R_f . Your own capital=\$8,000. You buy 2 contracts of index futures. You save the remaining fund at government bond (earning R_f). **After one year, stock index= S_T** . 一年後，你結清所有部位，請寫出你一年後的 cash flow . 請使用本題之數字與符號.

7. (15 分) 如何在實證上(empirically)判定合併收購 (mergers and acquisitions) 是否有正的 synergy? 請寫出 3 個最恰當方法，需寫清楚變數之定義，不可只寫獲利、成功等籠統文字 (需在這 3 個方法前分別標註：1、2、3)