

國立中山大學九十三年度碩士班招生考試試題

科目：經濟學(財管所)

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經濟學(財管所)

壹 選擇題(總體經濟)

單選題，每題五分，共五十分

1. 假設香港資本移動自由，且港幣與美元匯率固定，設美國利率上揚，則香港經濟中下列何者不會發生？假定物價不變之下，以 IS-LM-BP 模型分析 A) 名目貨幣供給減少 B) 利率上升 C) 所得降低 D) 經常帳餘額減少 E) 實質貨幣供給減少
2. 若一日新聞報導桃花島的貿易順差增加，設出口為 $X(Y^*, EP^*/P)$ ，進口為 $M(Y, EP^*/P)$ ， E 為名目匯率，* 代表國外，則依此新聞判斷桃花島的實質所得 A) 增加 B) 降低 C) 增加或降低皆有可能 D) 以上皆非
3. 依一般 IS-LM 模型，設一國增稅與擴張貨幣併用，結果均衡所得不變，則新均衡中的支出組成與原均衡相較 A) 消費不變 B) 政府消費增加 C) 政府赤字不變 D) 投資增加
4. 一般簡單凱因斯模型中，加入誘發性租稅 tY 及誘發性投資 iY ，若 $t=i$ ，則此模型之政府支出乘數與簡單凱因斯模型相較 A) 較大 B) 較小 C) 相同 D) 無法判別
5. 一般凱因斯模型中，設 $E=C+I+G$ ， $C=C_a+cY$ ，若欲儲蓄總額增加，則 A) 自發性儲蓄應增加 B) 自發性儲蓄應減少 C) 邊際儲蓄傾向應增加 D) 邊際儲蓄傾向應減少 E) 以上皆非
6. IS-LM-BP 模型中，假定物價不變，下列何者不具有排擠效果 A) 自發性消費增加 B) 自發性投資增加 C) 政府支出增加 D) 本國所得減少致貿易順差增加 E) 以上皆非
7. 下列何者計入當年 GNP? (A) 出售股票所得價款 (B) 家庭主婦操作家務的價值 (C) 警察的薪水 (D) 外籍勞工在台所賺工資 (E) 自國外購汽車之價值
8. 若股票價格上漲而物價卻持平，下列何者不是合理的敘述？ A) 因投資人預期未來經濟好轉，故股價上漲 B) 同時間因外資匯入，台幣升值故抑制物價上漲 C) 經濟成長致股市熱絡，但物價有僵固性所以尚未上漲 D) 股價上漲導致實質餘額效果，故抑制物價上漲
9. 若有總需求增加，導致物價上漲，有何機制可以抑制物價？ A) 物價上漲會有實質餘額效果，抑制支出 B) 物價上漲導致人民繳稅增加，抑制消費支出 C) 物價上漲導致出口減少，進口增加，故抑制支出 D) 依費雪假說，物價上漲導致利率提高，故抑制投資支出
10. 設有下列經濟模型
 $Y = C + I + G$; $C = 140 + 0.8Y_d$; $Y_d = Y - T$; $I = 200 - 500r$; $G = 120$;
 $M/P = L$; $M/P = 100$; $L = 50 + 0.3Y - 500r$; 試算出當 T 增加 100，IS 線向左橫移若干距離？ A) $0 < x < 200$ B) $200 \leq x < 300$ C) $300 \leq x < 400$ D) $400 \leq x < 500$ E) $500 \leq x$

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貳 選擇題 (個體經濟)

單選題，每題二分，共四十分

11. Modern microeconomic theory generally regards utility as

- a) cardinal.
- b) ordinal.
- c) independent.
- d) republican.
- e) democrat.

12. The Laspeyres index

- a) measures the change in the cost of the market basket purchased in the original year.
- b) measures the change in the cost of the market basket purchased in the later year.
- c) always exceeds 1.
- d) always is less than 1.
- e) none of the above.

13. The relationship between marginal revenue and the price elasticity of demand is

- a) $MR = P(1 - \frac{1}{n})$
- b) $P = MR(1 - \frac{1}{n})$
- c) $P = MR(1 + n)$
- d) $MR = P(1 + n)$
- e) none of the above.

14. The marginal product equals the average product when the latter is

- a) 1/2 of its maximum value.
- b) 1/4 of its maximum value.
- c) equal to its maximum value.
- d) 1 1/2 times its maximum value.
- e) none of the above.

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15. The firm's cost functions are determined by

- a) the price of its product.
- b) its assets.
- c) its production function.
- d) the age of the firm.
- e) none of the above.

16. The market demand curve for a particular kind of desk chair is as follows:

<u>Price (dollars)</u>	<u>Quantity demanded</u>
30	200
20	300
10	400
5	600
3	800

The industry producing this kind of chair is a constant-cost industry, and each firm has the following long-run total cost curve:

<u>Output</u>	<u>Total cost (dollars)</u>
1	10
2	12
3	15
4	30

(Each firm can produce only integer numbers of units of output.)

In the long run, the total number of firms in this industry will be about:

- a) 100.
- b) 200.
- c) 300.
- d) 400.
- e) 500.

17. A monopolist's total cost equals $100 + 3Q$, where Q is the number of units of output it produces per month. Its demand curve is $P = 200 - Q$, where P is the price of the product. The marginal revenue from the twentieth unit of output per month equals.

- a) \$3,600.
- b) \$3,439.
- c) \$180.
- d) \$140.
- e) none of the above.

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18. A dominant strategy is a strategy where
- the player loses.
 - a second-best approach is used.
 - pure strategies are mixed with impure strategies.
 - all of the above.
 - none of the above.
19. If one minimizes cost subject to the constraint that a certain output is produced, the Lagrange multiplier turns out to equal
- marginal revenue.
 - average cost.
 - marginal cost.
 - all of the above.
 - none of the above.
20. The elasticity of substitution for the Cobb-Douglas production function is
- less than 1.
 - 1.
 - greater than 1.
 - undefined.
 - dependent on the exponent of labor.
21. If there is only one variable input, the firm's demand curve for an input is obtained by multiplying
- marginal cost and marginal revenue curves.
 - marginal product and marginal revenue curves.
 - average cost and marginal revenue curves.
 - average cost and average revenue curves.
 - none of the above.
22. Under imperfect competition in the product market, the equilibrium price of an input is given by
- the intersection of the product demand and supply curves.
 - the intersection of the input demand and supply curves.
 - the intersection of the product demand and input supply curves.
 - all of the above.
 - none of the above.

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23. Firm R buys a painting for \$1,000 in 2001. If maintenance of the painting is costless, and if the interest rate is 0.10, how much must it sell the painting for in 2004 if the present value of the investment in the painting is to be nonnegative?
- a) At least $(1.10)^3 \times \$1,000$.
 - b) At least $(1.30) \times \$1,000$.
 - c) At least \$1,000.
 - d) At least $\$1,000 + (.30)^3 \times \$1,000$.
 - e) None of the above.
24. John Jerome's Neumann-Morgenstern utility function is $U = 10 + 3M$, where U is utility and M is monetary gain (in dollars). He will prefer the certainty of a gain of \$20 over a gamble where there is a 0.3 probability of a \$9 gain and a 0.7 probability of
- a) a \$31 gain.
 - b) a \$29 gain.
 - c) a \$27 gain.
 - d) a \$25 gain.
 - e) none of the above.
25. To determine the short-run supply curve of a firm selling in a perfectly competitive market, we need to know which of the following: (two answers)
- a) the firm's short-run MC curve
 - b) the firm's AC curve
 - c) the point of minimum average variable cost
 - d) market price for the firm's output
26. To determine whether a perfectly competitive firm will earn a profit or loss when it attains short-run equilibrium, we need to know which of the following: (two answers)
- a) the firm's short-run MC curve
 - b) the firm's AC curve
 - c) the point of minimum average variable cost
 - d) market price for the firm's output
27. If a perfectly competitive industry is in short-run equilibrium, we can be sure that:
- a) all producers in the industry are making a profit
 - b) every producers who is supplying output is making a profit
 - c) all producers who are supplying output are making the same profit
 - d) every producer who is supplying output is producing at a point where market price equals his marginal cost

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28. The price floor of rice is set at P_1 by government. Under P_1 , the farmers will then produce Y tons of rice. Under P_1 , however, the consumers will only demand X tons of rice ($X < Y$). With Y tons of rice production, to clear the market, the price needs to reduce to P_0 . If we know, $P_1(Y-X) > (P_1-P_0)Y$, then the elasticity of demand between P_0 and P_1 is:
- a) greater than 1
 - b) smaller than 1
 - c) equal to 1
 - d) uncertain of its range.
29. If the slope of MC curve is positive and the slope of market demand curve is negative, then a profit maximizing monopoly firm will set its price at P_2 . Furthermore, MC curve and Demand curve intersect at price equals P_1 . If government sets a price ceiling at P^* , then:
- a) shortage will occur when $P^* < P_1$
 - b) shortage will occur when $P^* < P_2$
 - c) shortage will occur when $P_2 < P^* < P_1$
 - d) the outcome is uncertain
30. the LR equilibrium price of a given competitive market is P_1 , and each firm produces an equilibrium output of Q_1 . There are altogether N_1 firms in the market. If the government levies a lump-sum tax of T dollars, the new LR equilibrium price and quantity (per firm) will then be P_2 and Q_2 and total number of firms remained is N_2 . Which of the following is most accurate:
- a) $Q_1 < Q_2$
 - b) $Q_1 N_1 > Q_2 N_2$
 - c) $P_2 < P_1 + (T/Q_2)$
 - d) both (a) and (c)
 - e) both (a) and (b)
 - f) both (b) and (c)
 - g) (a), (b) and (c)

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參 計算題 (個體經濟) (共 10 分)

Consider the following Gamble. A fair coin is flipped until a tail appears. You win \$1 if it appear on the first toss, \$2 if it appear on the second, \$4 if it appears on the third toss, and in general, $2^{(n-1)}$ if it appears on the n th toss. This gamble is commonly known as the St. Petersburg gamble.

- (i) Please compute the expected value of this gamble.
- (ii) Suppose that Mr. Chang's preference toward risk can be represented by a V-M utility function: $u(W)=\log W$.

If Mr. Chang starts with no initial wealth, please compute Mr. Chang's certainty equivalent of this gamble.

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查、選擇題，共 20 題，每題 3 分

1. 3月19日公司甲之股價=每股\$20，在外流通股數=1000萬股，公司甲於3月20日宣告將進行現金增資，籌資金額為1億元，此款項將用於投資案A，投資案A之NPV預估為2000萬，請問上述2000萬歸屬於誰？A: 原股東、B: 新股東、C: 原股東加上新股東、D: 以上皆非。
2. 延續上題，請問3月21日（即宣告後）甲公司之股價等於x，假設無資訊不對稱之問題，則A: $x \leq \$20$ ，B: $20 < x \leq 22$ ，C: $22 < x \leq 24$ ，D: $24 < x$ 。
3. 由於總統槍擊事件而引起的股市下跌屬於何種風險？A: 財務風險、B: 企業風險、C: 市場風險、D: 個別風險、E: 總風險。
4. 以下情形可不可以用IRR rule來評估分析？假設你的資金成本=15%: 標會的第一次開標如何決定標金(假設該會由各會員自行組成，沒有會首)，而你是得標者：A: 可以，B: 不可以。
5. 以下情形可不可以用IRR rule來評估分析？假設你的資金成本=15%: 評估某投資案，其cash flows為： $t=0$ (現在): \$100, $t=1$ 年: -\$150, $t=2$ 年: -\$300 (正的數字為: cash inflow, 負的數字為 cash outflow) : A: 可以，B: 不可以。
6. 以下為一些有價證券之交易價格及資料:

有價證券	編號	到期日	標的物	履約價格	有價證券目前之市價	有價證券	編號	有價證券目前之市價
買權	A	6個月後	台積電股票	\$80	\$5	台積電股票	E	\$78(每股)
買權	B	12個月後	聯電股票	\$40	\$6	聯電股票	F	\$36(每股)
賣權	C	6個月後	台積電股票	\$80	\$2	政府公債	G	利率=5%
賣權	D	12個月後	聯電股票	\$50	\$1			

- 台積電、聯電之股價分別為：\$78、\$36 (每股)，無風險利率為每年 5%，假設選擇權買賣與股票放空不須繳納保證金。根據上述資料，請問有價證券 A、C、E、G 之間有無套利機會？A: 有，B: 沒有，C: 無法決定。
7. 延續上題：請問有價證券 B、D、F、G 之間有無套利機會？A: 有，B: 沒有，C: 無法決定。
 8. 假設台灣電信公司決定向銀行貸款 500 億元以買回部分在外流通之普通股（即，舉債買回庫藏股），請問：根據稅的理論，台灣電信之股價應該 A: 上漲，B: 下跌，C: 不變。
 9. 延續上題，根據 MM 之理論（即，沒有稅、沒有破產成本、沒有資訊不對稱），台灣電信之股價應該 A: 上漲，B: 下跌，C: 不變。
 10. 延續第 9 題，在 MM 理論成立之原則下，以下何者不變：I. 資產報酬率，II. 台灣電信股價，III. 股東權益報酬率，IV. WACC : A: I only, B: I and II only, C: II and III only, D: I, II, and IV only.
 11. Which of the following statements is most correct?
 - A. If one firm has excess cash, purchasing another firm exposes the purchasing firm to additional taxes. Thus, firms with excess cash rarely undertake mergers.
 - B. The smaller the synergistic benefits of a particular merger, the greater the incentive to bargain in negotiations, and the higher the probability that the merger will be completed.
 - C. Financial economies which imply a lower cost of debt or greater debt capacity are rarely a relevant rationale for mergers.
 - D. Since shareholders are free to diversify their own holdings at lower cost, benefit from diversification is generally not a valid motive for a merge.
 - E. Acquiring firms send a signal that their stock is undervalued if they choose to use stock to pay for the acquisition.
 12. Which of the following statements is most correct?
 - A. The primary test of feasibility in a re-organization is whether every claimant agrees with the reorganization plan.
 - B. The basic doctrine of fairness states that all debt holders must be treated equally.
 - C. Since the primary issue in bankruptcy is to determine the sharing of losses between owners and

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- creditors, the "public interest" is not a relevant concern.
- D. While the firm is in bankruptcy, the existing management is always allowed to remain in control of the firm, though the court monitors its actions closely.
- E. decision to dissolve a firm through liquidation or to keep it alive through reorganization depends on a determination of the value of the firm if it is rehabilitated versus the value of its assets if they are sold off individually
13. A commercial bank estimates that its net income suffers whenever interest rates increase. The bank is looking to use derivatives to reduce its interest rate risk. Which of the following strategies best protects the bank against rising interest rates?
- A. Buying inverse floaters.
- B. Entering into an interest rate swap where the bank receives a fixed payment stream, and in return agrees to make payments that float with market interest rates.
- C. Purchase principal only (PO) strips that decline in value whenever interest rates rise.
- D. Enter into a short hedge where the bank agrees to sell interest rate futures.
- E. Sell some of the bank's floating rate loans and use the proceeds to make fixed rate loans.
14. Which of the following statements is most correct?
- A. Under normal conditions, a firm's expected ROE would probably be higher if it financed with short-term rather than with long-term debt, but the use of short-term debt would probably increase the firm's risk.
- B. Conservative firms generally use no short-term debt and thus have zero current liabilities.
- C. A short-term loan can usually be obtained more quickly than a long-term loan, but the cost of short-term debt is likely to be higher than that of long-term debt.
- D. If a firm that can borrow from its bank buys on terms of 2/10, net 30, and if it must pay by Day 30 or else be cut off, then we would expect to see zero accounts payable on its balance sheet.
- E. If one of your firm's customers is "stretching" its accounts payable, this may be a nuisance but does not represent a real financial cost to your firm as long as the firm periodically pays off its entire balance.
15. Which of the following statements about warrants and convertibles is not correct?
- A. Both warrants and convertibles are types of option securities.
- B. One primary difference between warrants and convertibles is that warrants bring in additional funds when exercised, while convertibles do not.
- C. The coupon rate on convertible debt is lower than the coupon rate on similar straight debt because convertibles are less risky.
- D. The value of a warrant depends on its exercise price, its term, and the underlying stock price.
- E. Warrants usually can be detached and traded separately from their associated debt.
16. Which of the following statements concerning dividend policy is most correct?
- A. Dividend increase announcements are usually perceived as negative signals because they indicate a lack of good investment opportunities.
- B. Although the residual policy is typically not used to set dividends on an annual basis, it is often used to set a firm's long-run dividend policy.
- C. A constant payout ratio policy enables stockholders to accurately predict future dividends.
- D. Since there is no evidence that one investor clientele is better than another, firms can change dividend policies frequently with no adverse impact on stock price.
- E. A low regular plus extra policy is ideally suited for firms with stable earnings streams.
17. Which of the following statements concerning the asymmetric information theory of capital structure is not correct?
- A. If outside funds are required, managers would issue new common stock if they believe their stock is overvalued.
- B. If outside funds are required, managers would issue debt when they believe their stock is undervalued.
- C. Investors recognize managers' incentives and hence tend to mark down a firm's stock price when new common stock is issued.
- D. Firms should maintain a reserve debt capacity, so that they can always issue debt under relatively favorable terms.
- E. Firms should over-leverage, so that they can always issue new common stock under relatively favorable terms.
18. Which of the following statements is most correct?
- A. An option's value is determined by its exercise value, which is the market price of the stock less its striking price. Thus, an option can't sell for more than its exercise value.

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- B. As stock price rises, the premium portion of an option on a stock increases because the difference between the price of the stock and the fixed striking price increases.
- C. Issuing options provides companies with a low cost method of raising capital.
- D. The market value of an option depends in part on the option's time to maturity and on the variability of the underlying stock's price.
- E. The potential loss on an option decreases as the option sells at higher and higher prices because the profit margin gets bigger.
19. Which of the following is most correct?
- A. Real options change the size, but not the risk, of expected cash flows.
- B. Real options change the risk, but not the size, of expected cash flows.
- C. Real options usually change the cost of capital that should be used to discount the expected cash flows.
- D. Very few projects have real options.
- E. Real options are less valuable when the underlying source of risk is high
20. Multinational financial management requires that
- A. The effects of changing currency values be included in financial analyses.
- B. Legal and economic differences be considered in financial decisions.
- C. Political risk be excluded from multinational corporate financial analyses.
- D. All of the above.
- E. Only A and B above.

貳、問答計算題，共 4 題，每題 10 分

1. 假設市場中所有股票根據權益市值(size)來排序可得到以下五個投資組合，無風險利率為每年 2%。

Size of stock	平均年報酬率	β
1= 最小	19.9%	1.10
2	15.2%	1.02
3	11.5%	0.95
4	11.2%	0.93
5=最大	9.9%	0.91

平均年報酬率與 β 係為股市中之觀察值。請問上述觀察是否符合 CAPM 之理論？Why？（答案請勿超過 30 字，超過部分不計分）

2. 你父親花了 70 萬元買了一部汽車，預計將使用 7 年，然後在第七年底以 8 萬元將它賣掉，在這七年中，你父親每年汽車跑了 1 萬公里，假設你父親汽車的汽油、維修、停車費、稅金與保險費之成本總共為每公里 3 元，請問一步一步地說明使用這部汽車的每公里之總成本為多少元？無風險利率為每年 2%（提示：需將汽車之價金考慮進來。如果你需要其他數字，請自行假設。數字不必精準，只需計算過程交代清楚即可）注意：必須一步一步地說明，否則不計分。
3. XYZ Company has 12 percent semiannual bonds outstanding which mature in 10 years. Each bond is now eligible to be called at a call price of \$1,060. If the bonds are called, the company must replace the bonds with new 10-year bonds. The flotation cost of issuing new bonds is estimated to be \$45 per bond. How low would the yield to maturity on the new bonds have to be, in order for it to be profitable to call the bonds today? (That is, what is the "breakeven rate"?)
4. 請問台灣目前'金控'時代的來臨對財務管理的影響為何？請就下列三點回答 1. 金控是什麼？ 2. 金控對公司理財影響為何？ 3. 金控對個人理財影響為何？

I. Part One contains 50 points.

Please answer the following true (T) and false (F) questions. Each question carries a weight of **5 points** for this part. Each answer must be provided with **justification** to earn a **full credit**, otherwise only a partial credit will be graded.

1. Extreme values in a data have a strong effect upon the median and mean. (T, F)
2. The mode is always found at the highest point of a graph of a data distribution. (T, F)
3. The dispersion of a data set gives insight into the reliability of the measure of central tendency. (T, F)
4. The measure of dispersion most often used by statisticians is the average of absolute deviation. (T, F)
5. The coefficient of variation is measured in the same units as the observations in the data set. (T, F)
6. The variance of any random variable indicates the average distance of any observation in the data set from the mean. (T, F)
7. The expected value of an experiment is obtained by computing the arithmetic average value. (T, F)
8. For a normal distribution, the mean always lies between the mode and median. (T, F)
9. When using the t distribution in estimation, we must assume that the population is approximately not normal. (T, F)
10. An interval estimate is a range of values used to estimate the shape of a population's distribution. (T, F)

Part Two (每題 5 分)

選擇題(共三題，單選)

1. If two variables, x and y , have a good linear relationship, then
 - A. there may or may not be any causal relationship between x and y
 - B. x causes y to happen
 - C. y causes x to happen
 - D. answer b and c are both correct
 - E. none of the above answer is correct.

2. Autocorrelation in a regression forecasting model may be overcome by
 - A. using the F test, instead of the t test
 - B. increasing the sample size
 - C. utilizing additional independent variables
 - D. increasing the level of significance for the F test

3. The nonparametric alternative to the one-way analysis of variance is the _____.
 - A. chi-square goodness of fit test
 - B. Kruskal-Wallis test
 - C. Mann-Whitney U test
 - D. Wilcoxon test

問答題(共七題)

1. What is the meaning of "BLUE" in Regression analysis?

2. When solving a one-way ANOVA with k treatment levels using regression methods, how many dummy variables should the regression model have?

(3-5). Mr. Lee is evaluating investment alternatives for the \$100,000 which he win from lottery. His investment advisor has identified two alternatives and constructed the following tables which show (1) expected profits (in \$10,000's) for various market conditions and their probabilities, and (2) the advisor's track record on predicting Bull and Bear markets.

Investment	Market Condition		EMV	Advisor's Prediction	Actual Market Condition	
	Bull (0.8)	Bear (0.2)			Bull (S_1)	Bear (S_2)
Bonds	12	-3	9	Bull (F_1)	0.9	0.3
Stocks	25	-30	14	Bear (F_2)	0.1	0.7

3. If the advisor predicts a Bull market, the revised probability of a Bear market, $P(S_2|F_1)$, is ?
4. If the advisor predicts a Bull market, the EMV of the Stocks alternative, using revised probabilities, is ?
5. The EMV of this opportunity with the advisor's prediction is ?

- (6-7). A carload of palletized aluminum castings has arrived at Mansfield Motor Manufacturers. The car contains 1,000 pallets of 100 castings each. Mario Munoz, manager of Quality Assurance, directs his crew to randomly select 10 castings for inspection. If more than 1 of the castings are defective, Mario will reject the shipment; otherwise, he will accept the shipment. If 10% of the castings are defective, (a level which is considered to be bad quality),
 6. the consumer's risk is ?
 7. the producer's risk is ?