

一. 選擇題 (共 45 分, 每題 3 分)

1. Suppose an individual's MRS (of steak for beer) is 2:1. That is, at the current consumption choices he or she is willing to give up 2 beers to get an extra steak. Suppose also that the price of a steak is \$1 and a beer is 25¢. Then in order to increase utility the individual should
- buy more steak and less beer.
 - buy more beer and less steak.
 - continue with current consumption plans.
 - not enough information to answer the question.
2. If a consumer purchases only two goods (X and Y) and the demand for X is elastic, then a rise in the price of X
- will cause total spending on good Y to rise.
 - will cause total spending on good Y to fall.
 - will cause total spending on good Y to remain unchanged.
 - will have an indeterminate effect on total spending on good Y .
3. The production function $q = \sqrt{KL}$
- exhibits constant returns to scale and constant marginal productivities for K and L .
 - exhibits diminishing returns to scale and diminishing marginal productivities for K and L .
 - exhibits constant returns to scale and diminishing marginal productivities for K and L .
 - exhibits diminishing returns to scale and constant marginal productivities for K and L .

4. It is usually assumed that a perfectly competitive firm's supply curve is given by its marginal cost curve. In order for this to be true, which of the following additional assumptions are necessary?

- I. That the firm seek to maximize profits.
 - II. That the marginal cost curve be positively sloped.
 - III. That price exceeds average variable cost.
 - IV. That price exceeds average total cost.
- (a). All of the above.
 - (b). I and II but not III and IV.
 - (c). I and III but not II and IV.
 - (d). I and II only.
 - (e). I, II and III, but not IV.

5. Firms in long-run equilibrium in a perfectly competitive industry will produce at the low points of their average total cost curves because

- (a). free entry implies that long-run profits will be zero no matter how much each firm produces.
- (b). firms seek maximum profits and to do so they must choose to produce where average costs are minimized.
- (c). firms maximize profits and free entry implies that maximum profits will be zero.
- (d). firms in the industry desire to operate efficiently.

6. In free exchange among two individuals the position on the contract curve finally arrived at will, among other things, depend on:

- I. The bargaining strength of each individual.
- II. The initial endowments of the individuals.
- III. The individuals' preferences.

Which of these correctly completes the statement?

- (a). Only III.
- (b). Only II.
- (c). I and III, but not II.
- (d). II and III, but not I.
- (e). I, II, and III.

7. In the price leadership model,

- (a). firms believe that price increases result in a very elastic demand, while price decreases result in an inelastic demand for their product.
- (b). each firm acts as a price taker.
- (c). one dominant firm takes the reactions of all other firms into account in its output and pricing decisions.
- (d). firms coordinate their decisions to act as multiplant monopolies.

8. The Nash equilibrium in a Bertrand price setting game in which firms first choose output capacities resembles the equilibrium in

- (a). the competitive model.
- (b). the Cournot model.

(c). the cartel model.

(d). the price leadership model.

9. In a perfectly competitive market a firm's rental rate for a machine (v) will be given by: $v = P(r + d)$ where r is the prevailing rate of interest and d is the depreciation rate. In this formula P represents

(a). the present market price of the machine.

(b). the initial purchase price of the machine (assuming this differs from its present market price).

(c). the price of the firm's product.

(d). the depreciated value of the machine.

10. The "lemons model" predicts quality deterioration in the used car market because

(a). used cars require increasing maintenance.

(b). suppliers and demanders have different information about cars' quality.

(c). used cars are generally of a lower quality than new cars.

(d). people will usually buy new cars if they are available.

11. Based on your understanding of the classical model and of the determination of the exchange rate (E), an increase in the capital stock will cause:

(a). an increase in P (the price level) and an increase in E .

(b). an increase in P (the price level) and a reduction in E .

(c). a reduction in P (the price level) and a reduction in E .

(d). a reduction in P (the price level) and an increase in E .

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12. Which of the following events might cause the real interest rate (as determined in the loanable funds model) and nominal interest rate to move in different directions?

- (a). an increase in expected inflation.
- (b). a reduction in expected inflation.
- (c). an increase in the size of a budget deficit.
- (d). an increase in the rate of growth of the money supply.
- (e). none of the above.

13. Assume that the purchasing power parity can be used to explain movements in the exchange rate, E . An increase in the foreign price level (P^*) will cause:

- (a). no change in E .
- (b). a depreciation of the domestic currency.
- (c). an equal change in the domestic price level P .
- (d). an appreciation of the domestic currency.

14. Which of the following is a facet of monetarism?

- (a). a set of testable propositions from which policy prescriptions are determined.
- (b). movements in the money supply are considered to be a major determinant of movements in income, prices, and real output in the short run.
- (c). the monetary authority is accountable for movements in the money supply.
- (d). all of the above.
- (e). none of the above.

15. The time inconsistency problem will likely result in which of the following after the economy reaches equilibrium?
- actual inflation will exceed expected inflation.
 - actual inflation will be less than expected inflation.
 - inflation will be relatively low.
 - inflation will be higher than it otherwise would be in the absence of the time inconsistency problem.

二. 申論暨計算題 (共 55 分)

(一). 假定有一獨占廠商，其以固定的平均成本和邊際成本來從事生產，

$AC = MC = 5$ ，且此廠商所面對的市場需求函數為： $Q = 53 - P$ ，則：

- 試計算出獨占廠商追求最大利潤目標下的均衡價格及產出量以及廠商之利潤？(6分)
- 若將獨占廠商改為完全競爭廠商，則此時均衡價格及產出量為何？(6分)
- 請分別計算出在獨占及完全競爭下之消費者剩餘，以及在獨占生產下之社會無謂損失？(8分)

(二). 美伊再度爆發戰爭導致國際油價上漲且一直居高不下，試請以一般完整總體經濟模型分析：

- 此等衝擊對我國均衡所得、物價、利率與就業之影響。(6分)
- 此種情況下，採用貨幣政策之效果與困難。(6分)
- 欲解決此問題，可採用何種措施。(8分)

(三). 試請詳細說明 Harrod - Domar 經濟成長模型；並解釋其何以被稱之為刀尖均衡 (knife edge) 模型。(15分)

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(簽章) 93年3月30日

本考試不能使用可程式/工程用計算機，解題請詳列過程

1. Jerry is a decision analyst at ABC Corp. and his new assignment is to evaluate the proposal of three alternative decisions. The following payoff table describes the decision situation and the probabilities associated with two economic conditions .

State of Nature\ Decision	Expand	Maintain	Sell now	Probability
Good Economic Condition	80,000	130,000	32,000	0.7
Poor Economic Condition	50,000	-15,000	32,000	0.3

- (a) Compute the expected value of perfect information. (8%)
- (b) Develop a decision tree with the expected values at the probability nodes. (7%)
- (c) Jerry considers to hire a consultant to study the future situations. The report will be positive (P) or negative (N), indicating either a good (g) or poor (p) economic conditions. The conditional probabilities are as follows: $p(P|g)=0.7$ $p(N|g)=0.3$ $p(P|p)=0.2$ $p(N|p)=0.8$. Perform a decision tree analysis using the additional information above (15%)

2. A product designer wants to decide if a redundant component with a probability of 0.98 should be added in a system for a cost of \$300. The system has a critical component with a probability of 0.98 of operating. System failure would involve a cost of \$30,000. A \$200 switch with a probability of 0.99 could be added that would automatically transfer the system to the backup component in the event of a failure. Should the backup component be added? (20%)

3. Mu-Sing Corp. receives several thousand components from EZ supplier every week. Mu-Sing Corp. has the option of conducting a 100% inspection before accepting the components. The decision is based on the random sample of 20 components. If components are not inspected, defectives become apparent during a later process, at which time replacement cost is \$800 per component, inspection cost for 100% inspection is \$80 per component. If the shipment actually contains 5% defective items: (a) What is the probability that it would be accepted without 100% inspection? Interpret your result. (b) What is the probability of Type 1 error? Type 2 error? Why? (20%)

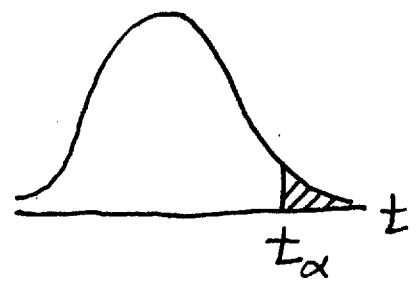
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4. Independent random samples were selected from two normal populations. The data are shown below.

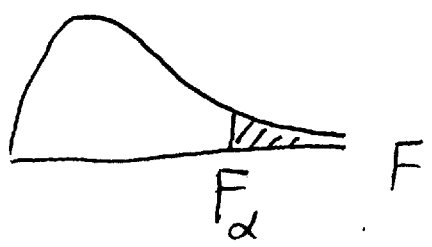
Sample A	25	20	14	19	22
Sample B	35	37	31	49	40

- (a) Does these data provide sufficient evidence to indicate that μ_A differs from μ_B ? Test using $\alpha = 0.1$.
- (b) Find a 90% confidence interval for $\mu_A - \mu_B$. Compare your interpretation of the confidence interval with your test results in part (a). (30%)

t 分配



ν	$t_{.100}$	$t_{.050}$
1	3.078	6.314
2	1.886	2.920
3	1.638	2.353
4	1.533	2.132
5	1.476	2.015
6	1.440	1.943
7	1.415	1.895
8	1.397	1.860
9	1.383	1.833
10	1.372	1.812



ν_2	NUMERATOR DEGREES OF FREEDOM					
	1	2	3	4	5	6
1	161.4	199.5	215.7	224.6	230.2	234.0
2	18.51	19.00	19.16	19.25	19.30	19.33
3	10.13	9.55	9.28	9.12	9.01	8.94
4	7.71	6.94	6.59	6.39	6.26	6.16
5	6.61	5.79	5.41	5.19	5.05	4.95
6	5.99	5.14	4.76	4.53	4.39	4.28
7	5.59	4.74	4.35	4.12	3.97	3.87
8	5.32	4.46	4.07	3.84	3.69	3.58
9	5.12	4.26	3.86	3.63	3.48	3.37
10	4.96	4.10	3.71	3.48	3.33	3.22

問答題，共四題，每題 25 分

- 一，企業的社會責任 (corporate social responsibility) 是什麼？鋼鐵大王卡內基 (Andrew Carnegie) 對企業社會責任的觀點與經濟學家傅立德曼 (Milton Friedman) 有哪些差異？企業倫理 (corporate ethics) 在談什麼？如何建構一個符合倫理的企業？
- 二，傳統型階層組織與學習型組織的差異性何在？為何學習型組織受到管理者的重視？
- 三，Michael Porter 的策略內涵有哪些？策略性人力資源管理強調人力資源管理的政策與實務必須配合策略的需求。試以 Michael Porter 的策略內涵為依據來分析不同策略所需要的人力資源管理模式。
- 四，知識工作者 (knowledge workers) 的比重在組織中正在增加中。試問其價值觀與特質與傳統型工作者的差異。如何激勵與領導這種工作者？詳述理由。

一. 選擇題 (共 45 分, 每題 3 分)

1. Suppose that at current consumption levels an individual's marginal utility of consuming an extra hot dog is 10 whereas the marginal utility of consuming an extra soft drink is 2. Then the *MRS* (of soft drinks for hot dogs)--that is, the number of hot dogs the individual is willing to give up to get one more soft drink is
 - (a). 5.
 - (b). 2.
 - (c). 1/2.
 - (d). 1/5.

2. If an individual buys only two goods and these must be used in a fixed relationship with one another (e.g., coffee and cream for a coffee drinker who never varies the amount of cream used in each cup), then
 - (a). there is no substitution effect from a change in the price of coffee.
 - (b). there is no income effect from a change in the price of coffee.
 - (c). Giffen's Paradox must occur if both coffee and cream are inferior goods.
 - (d). an increase in income will not affect cream purchases.

3. A technical innovation in the production of automobiles by Toyota Motor Company's for 1 million cars per year would necessarily
 - (a). shift the "1 million car" isoquant away from the origin.
 - (b). shift the "1 million car" isoquant toward the origin.
 - (c). cause 1 million cars to be produced with more capital and less labor.
 - (d). cause 1 million cars to be produced with more labor and less capital.

4. Suppose the production function for good q is given by $q = 3 \times K + 2 \times L$ where K and L are capital and labor inputs. Consider three statements about this function:

- I. The function exhibits constant returns to scale.
 II. The function exhibits diminishing marginal productivities to all inputs.
 III. The function has a constant rate of technical substitution.

Which of these statements is true?

- (a). All of them.
 (b). None of them.
 (c). I and II but not III.
 (d). I and III but not II.
 (e). only I.
5. The infant industry case for tariff protection assumes that the protected industry is
- (a). a decreasing cost industry.
 (b). an increasing cost industry.
 (c). a constant cost industry.
 (d). the producer of a new product.
6. Suppose two goods (X and Y) are being produced efficiently and that the production of X is always more labor intensive than the production of Y . Production depends only on two factors (capital and labor); these may be smoothly substituted for each other. The total quantities of these inputs are fixed. An increase in the production of X and a decrease in the production of Y will
- (a). increase the capital-labor ratio in each firm.
 (b). decrease the capital-labor ratio in each firm.
 (c). leave the capital-labor ratio for each firm unchanged.
 (d). increase the capital-labor ratio in Y production and decrease the capital-labor ratio in X production.

7. In a contestable market, firms produce where
- price equals marginal cost and long-run average cost.
 - price equals marginal cost above long-run average cost.
 - marginal cost equals marginal revenue and long-run average cost.
 - marginal cost equals marginal revenue below long-run average cost.
8. Under the price leadership model,
- most firms act independently of the leader.
 - the leader's price is always lower than the other firms' prices.
 - the leader's price is always higher than the other firms' prices.
 - all firms adjust their prices to that chosen by the leader.
9. The Nash equilibrium is a Bertrand game of price setting where firms have different marginal cost is
- efficient because all mutually beneficial transactions will occur.
 - efficient because of the free entry assumption.
 - inefficient because some mutually beneficial transactions will be foregone.
 - inefficient because of the uncertainties inherent in the game.
10. Perfectly competitive markets will tend to underallocate resources to nonexclusive public goods because
- these goods are produced under conditions of increasing returns to scale.
 - no single individual can appropriate the total benefits provided by the purchase of such goods.
 - these goods are best produced under conditions of monopoly.
 - no private producer can provide the capital necessary to produce such goods.
11. Based on your understanding of the classical model and of the determination of the exchange rate (E), an increase in the capital stock will cause:
- an increase in P (the price level) and an increase in E.
 - an increase in P (the price level) and a reduction in E.

- (c). a reduction in P (the price level) and a reduction in E.
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 (c). an increase in the size of a budget deficit.
 (d). an increase in the rate of growth of the money supply.
 (e). none of the above.
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15. The time inconsistency problem will likely result in which of the following after the economy reaches equilibrium?

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二. 申論暨計算題 (共 55 分)

(一). 假設台北市的錄影帶出租市場處於獨占性競爭狀況，其需求曲線為：

$$P = 100 - 0.004 \cdot Q$$

其中 Q 為每星期錄影帶出租的數量，而 Magic 影視公司的長期平均成本 (LRAC) 為：

$$LRAC = 8 - 0.006 \cdot Q + 0.000002 \cdot Q^2$$

Magic 影視公司王經理想知道在利潤極大的情況下，均衡的價格與數量以及其所對應的利潤為何？(20 分)

(二). 為振興經濟，政府正研擬各種方案以激勵民間的投資意願，請具體分析影響目前投資意願之主要因素，以及政府可以採行之激勵措施。(15 分)

(三). 試以消費借貸模型 (The Consumption Loan Model) 分析利率上升對於消費與儲蓄之影響；又倘若政府為籌措財源而採取增稅措施，則試問民間消費與儲蓄可能產生何種變動？(20 分)

1. Suppose that a firm has a Cobb-Douglas production function $f(x, y) = x^a y^b$ and that if it faces output price p and input prices w and r , respectively. Solve the first order conditions for a profit-maximizing input bundle. Use the second order conditions to determine the values of the parameters a , b , p , w , and r for which this solution is a global max. (20%)
2. If x thousand dollars is spent on labor and y thousand dollars is spent on equipment, a certain factory produces $f(x, y) = 50x^{1/2}y^2$ units of output.
 - a. How should \$80,000 be allocated between labor and equipment to yield the largest possible output? (10%)
 - b. Estimate the change in maximum output if this allocation decreased by \$1000. (5%)
3. a. Let $f: R^n \rightarrow R^1$ is continuously differentiable on an interval I in R . Show that f is concave on I if and only if $f(y) - f(x) \leq f'(x)(y - x)$, $\forall x, y \in I$. (10%)
 - b. Consider the expenditure function $e(\mathbf{p}, u)$, which describes the minimal amount of income necessary to achieve utility u at the price \mathbf{p} . It can be described analytically as $e(\mathbf{p}, u) = \min\{p_1x_1 + \dots + p_nx_n : U(\mathbf{x}) \geq u\}$ where x_i denote the amount of commodity i and $U(\mathbf{x}) = U(x_1, \dots, x_n)$ be the consumer's utility function which measures the consumer's level of the satisfaction with commodity bundle $\mathbf{x} = (x_1, \dots, x_n)$. Show that the expenditure function is concave in \mathbf{p} . (10%)
4. Suppose that you now have \$10,000 and that you expect to save an additional \$4,000 during each year, and all of this is deposited in a bank paying 5% interest compounded continuously. Let $y(t)$ be your bank balance (in thousands of dollars) after t year.
 - a. Write a differential equation and initial condition to model your bank balance. (5%)
 - b. Solve your differential equation and initial condition. (10%)
5. Evaluate the following integrals:
 - a. $\int_0^1 \int_x^1 e^{y^2} dy dx$ (10%)
 - b. $\int_0^1 \int_0^y y^2 e^{xy} dx dy$ (10%)
6. An \$15,000 loan is to be repaid in four installments of \$5000 each at the end of the first, second, third, and fourth years. Use Newton's method to find the internal rate of return (to the nearest tenth of a percent). (10%)

共四題，每題 25%。(請自行斟酌答案長度，以控制時間。)

1. 總經理將董事長的兒子小馬調到業務部門磨鍊，並召見業務部的林副總和張協理說明。小馬將安置在張協理下面，工作內容由業務部林副總和張協理決定，但是主要是由張協理安排。張協理看了一下董事長的兒子小馬的簡歷，國內明星高中畢業，聯考考上國力大學就讀一年後就到美國就讀名私立大學，並取得企管碩士，畢業後被老董事長召回返國，在公司內任職，初任職於研發單位，不久後即調財務，約一年後就調行銷，人事單位給小馬的職階是 management trainee。張協理思考要安排怎樣的工作給小馬，由於老董事長長與總經理都無明確的指示，張協理只好自己斟酌。老董事長事業很龐大，家財在國內排名前 100 大，作風果斷，行事正直。請問張協理應安排怎樣的工作給小馬？陳述你的理由。

2. 小胡在一家資訊公司上班有些年資，被升為副理，在新單位任職，公司過去幾年成長很快，逐漸的新進人員都是很不錯的大學畢業，許多是資訊科系，不像小胡雖是大學畢業，但是非資訊科系，小胡的部門主管藍經理，是公司成立半年就進來的元老，專科畢業。由於資訊業的競爭，上面對藍經理的部門的要求也就不斷增加，結果小胡發現他的單位的新進人員流動率很高，使得他部門工作進度落後，許多問題沒有人能解決。小胡揣度，問題可能出在藍經理，他對新進人員往往交予許多無關緊要的雜務而影響該新進人員的正常工作，常不給足夠的時間完成交辦任務，安排的任務並不針對個人過去完成任務的經驗。由於單位績效不佳，也影響小胡的前途，小胡有意與上面反應他的看法。請問你對小胡的意向有何意見？他應如何與上面解釋？

3. 描述你所曾參加的一個公司(或單位)的會議：參加者、議題、進行情形、和其它你認為重要的因素，並表示你對該次會議的觀感。

4. 底下是某電視公司開會中的談話：

甲：「我一切聽從長官裁示，要我怎麼做都可以。」

乙：「真搞不懂，製作部連出租個棚應該要打幾折，都要拿到主管會議請總經理裁決，難道部門主管自己沒辦法對決策負責嗎？」

丙：「你給別人太多壓力了！台灣媒體的環境不就是這樣爛嘛？我們現在已經比以前好很多了，放輕鬆一點。」

丁：「我們是在比爛的嗎？我們應對我們的社會負責。」

請問該公司有什麼問題？應如何做？重點提示即可。