

東吳大學

99年試題詳解

(國貿系二)

試題

(一) 選擇題：

1. The four components of aggregate planned expenditure are (A) the real interest rate, disposable income, wealth, and expected future income (B) the real interest rate, consumption expenditure, investment and government expenditures on goods and services (C) consumption expenditure, investment, government expenditures on goods and services, and wealth (D) consumption expenditure, investment, government expenditures on goods and services, and net exports.
2. The marginal propensity to consume is the (A) fraction of a change in disposable income spent on consumption expenditure (B) amount saving increases when consumption expenditure decreases (C) fraction of a change in saving spent on consumption expenditure (D) fraction of a change in consumption expenditure that is not saved.
3. Which of the following describes inflation correctly? (A) a one-time jump in the price level (B) an increase in real wages (C) a persistent increase in the price level (D) the fall in the price level from one year to another year.
4. Intermediate goods are excluded from GDP because (A) their inclusion would involve double counting (B) they represent goods that have never been purchased so they cannot be counted (C) their inclusion would understate GDP (D) the premise of the question is incorrect because intermediate goods are directly included in calculating GDP.
5. The distinction between a flow and a stock is that a flow measures (A) liquid items, while a stock measures solid items (B) an account on a

- monthly basis, while a stock measures it on an annual basis (C)a value in dollars, while a stock measures it in real terms (D)a quantity per unit of time, while a stock measures a quantity that exists at a point in time.
6. Suppose that over a period of years the country of Quasiland switched from being an agriculturally-based economy to a technologically-based economy. As a result, many people lost jobs because they lacked the correct skills. These people would be considered part of (A)frictional unemployment (B)structural unemployment (C)cyclical unemployment (D)discouraged workers.
7. The Classical dichotomy states that (A)the forces that determine the real variables are the same as those that determine the nominal variables (B)the forces that determine the real variables are never the same as those that determine the nominal variables (C)at full employment, the forces that determine the real variables are independent from those that determine the nominal variables (D)at zero unemployment, the forces that determine the real variables are independent from those that determine the nominal variables.
8. Money's function as a medium of exchange means that (A)money is a common denominator for expressing the prices of goods and services (B)money can be used to store wealth (C)money serves as an acceptable means of payment (D)money requires a double coincidence of wants.
9. Credit cards are (A)a part of money because they are used in so many transactions (B)a part of money when the transaction approach is used but not when the liquidity approach is used (C)not part of money because they represent a loan of money to the user (D)not part of money because the government has no control over the amount of credit outstanding.
10. Fiscal policy can be defined as (A)use of the federal budget to reach macroeconomic objectives (B)government policy with respect to transfer payments such as unemployment compensation and welfare (C)government policy to retire the government debt (D)government spending and tax decisions accomplished using automatic stabilizers.

(二)問答與計算題：

1. The table below gives the demand and supply schedules for bottled spring water in Springsboro. Assume that the only people who benefit from spring water are the people who drink it and the only people who bear the cost of bottled spring water are the people who produce it.

Price (cents per bottle)	Quantity demanded (bottles per day)	Quantity supplied (bottles per day)
40	1,200	0
80	1,000	200
120	800	400
160	600	600
200	400	800
240	200	1,000
280	0	1,200

- (1) Draw the demand and supply curves. What are the equilibrium price and equilibrium quantity of spring water? Is this equilibrium efficient? Explain.
 - (2) What is the maximum price that consumers are willing to pay for the 400th bottle? What is the minimum price that producers are willing to accept for the 400th bottle? Explain.
 - (3) Are 400 bottles a day less than or greater than the efficient quantity? Explain your answer.
 - (4) If the market for spring water is efficient, what is the consumer surplus? Show it on your graph. What is the producer surplus? Show it on your graph.
 - (5) If spring water bottlers produce 400 bottles a day, is there a deadweight loss? If yes, what is it? Explain your answer using your graph.
2. Suppose you plan to go to school this summer. The cost of tuition and textbooks is \$1,400 and housing, board, and entertainment will cost you \$500. If you didn't go to school, you'd live in your parents' house for free, but your other living expenses would be about the same. Also, if you didn't

go to school you'd work full time and could earn \$8,000. You can still work part time while attending the summer school, but you will earn only \$3,000.

- (1) What will the summer school cost you in terms of money explicitly paid?
- (2) What are the opportunity costs of going to summer school that you don't pay explicitly? Explain.
- (3) What is your total opportunity costs of going to school this summer? Explain your answer.

3. Nimbus, Inc., and Cleansweep, Inc., are the only producers of flying brooms. Each firm has two strategies: Spend 30,000 dollars a year on research and development (R&D) or spend nothing on R&D. If neither firm spends on R&D, Nimbus' economic profit is 80,000 dollars and Cleansweep's economic profit is 40,000 dollars. If each firm conducts R&D, market shares are maintained, but each firm's profit is lower by the amount spent on R&D. If Nimbus conducts R&D and Cleansweep does not, Nimbus makes an economic profit of 120,000 dollars, while Cleansweep incurs an economic loss of 20,000 dollars. If Cleansweep conducts R&D and Nimbus does not, Cleansweep makes a profit of 60,000 dollars while Nimbus loses 10,000 dollars.

- (1) Construct a payoff matrix for the game that Nimbus and Cleansweep must play.
 - (2) Find the Nash equilibrium. In the Nash equilibrium, what is each firm's equilibrium profit?
 - (3) What is the cooperative outcome? Would the firms make more economic profit if they collude to achieve the cooperative outcome?
4. 在商學領域裡經常有短期 (short term或short run) 與長期 (long term或long run) 的區別, 請說明:
- (1) 會計學對短期與長期的定義與差異。
 - (2) 個體經濟學對短期與長期的定義與差異。
 - (3) 總體經濟學對短期與長期的定義與差異。

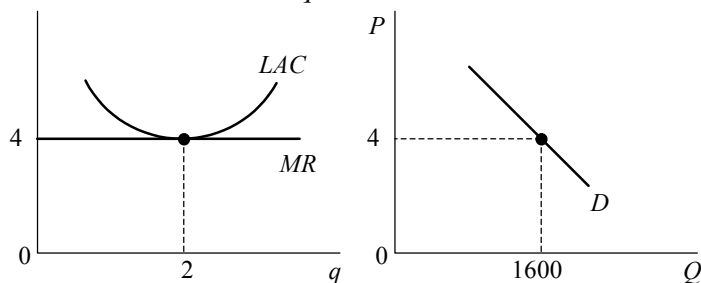
解答

(一)完全競爭市場，在長期由於廠商可以自由加入與退出市場，故長期之經濟利潤(π)為0，由於完全競爭廠商為價格接受者，面對彈性無限大之需求線，亦為MR線，呈水平線，故在 $\pi=0$ 情況下，該水平線與u字形之長期平均成本(LAC)線之最低點相切，以下即求出LAC最低點位置之過程。

$$LAC = \frac{C}{q} = q^2 - 4q + 8, \quad \frac{dLAC}{dq} = 2q - 4 = 0, \quad q = 2, \quad P = \min.$$

$LAC = 2^2 - 4 \times 2 + 8 = 4$ ，故 $P = 4$ ，代入市場需求，

$$Q = D = 1,600, \quad \text{廠商數目} = \frac{Q}{q} = 800 \text{ (家)}。$$



(二)1.(1)Jay之決策：

- ①若Jolin送花致意，則Jay獨撐全場有利($5 > 0$)；
- ②若Jolin接受與Jay共舞，則Jay獨撐全場有利($11 > 10$)，故Jay之優勢策略為「獨撐全場」。

(2)Jolin之決策：

- ①若Jay獨撐全場，則Jolin送花致意有利($8 > 0$)；
- ②若Jay邀Jolin共舞，則Jolin送花致意有利($15 > 12$)，故Jolin之優勢策略為「送花致意」。

(3)Nash均衡，亦為優勢策略均衡為Jay「獨撐全場」，且Jolin「送花致意」。

2.題1.乃是在未勾結下，各自決策之結果。若兩人互相勾結，追求共同之最大利益，則Jay應邀Jolin共舞，且Jolin接受此一邀請，雙

方總利益最大(12+10=22)。

(三) 偏好是否相同，視各效用函數之邊際替代率(MRS)是否相同而定。

$$\text{效用函數 } U = X^{0.5}Y^{0.25}, \quad MRS_{XY} = \frac{MU_X}{MU_Y} = \frac{0.5X^{-0.5}Y^{0.25}}{0.25X^{0.5}Y^{-0.75}} = \frac{2Y}{X}。$$

$$1. V_a = X^2Y^4, \quad MRS_{XY} = \frac{MU_X}{MU_Y} = \frac{2XY^4}{4X^2Y^3} = \frac{Y}{2X}, \quad \text{偏好不同；}$$

$$2. V_b = 2\ln X + \ln Y, \quad MRS_{XY} = \frac{MU_X}{MU_Y} = \frac{\frac{2}{X}}{\frac{1}{Y}} = \frac{2Y}{X}, \quad \text{偏好相同；}$$

$$3. V_c = XY^{0.25} + 4, \quad MRS_{XY} = \frac{MU_X}{MU_Y} = \frac{Y^{0.25}}{0.25XY^{-0.75}} = \frac{Y}{0.25X} = \frac{4Y}{X},$$

偏好不同；

綜上分析，只有 V_b 偏好與題示相同。

(四) 1. 由於價格上升3%，需求量便減少12%，可知芒果之需求價格彈性

$$(E^d) = \frac{12\%}{3\%} = 4；$$

$$2. \text{芒果之邊際成本}(MC) \text{ 為 } 750 \text{ 元，} MR = MC = P \left(1 - \frac{1}{E^d} \right), \quad 750 =$$

$$P \left(1 - \frac{1}{4} \right), \quad \text{故 } P = 1,000 \text{ 元乃利潤極大化之訂價。}$$

此時 $P = 1,200 > 1,000$ ， $P > MC$ ，無法符合市場效率。

(五) 1. 市場均衡條件： $q^D = q^S$ ， $90 - 5P = -30 + 15P$ ， $20P = 120$ ， $P = 6$ ， $Q = 60$ ，如下圖。

$$\text{社會福利} = CS + PS = (16 - 2) \times 60 \div 2 = 420。$$