

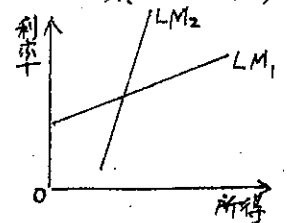
國立中山大學八十八學年度碩博士班招生考試試題

科目：總體經濟學 (經濟所)

共貳頁 第壹頁

一. 如何克服類<sup>似</sup>近兩年發軔自泰國, 席捲整個東亞, 幾年波及全球的全融風暴? (20%)

二. 在IS-LM的模式中, 如圖所示,  $LM_1$  比  $LM_2$  平坦, 問貨幣政策的所得效果在  $LM_1$  或  $LM_2$  較大? 請用數學證明並用圖型展示你的答案。(20%)



三. Multiple Choice (單選) 60%

1. Structural deficits:

- (1) vary in size with changes in discretionary fiscal policy.
- (2) vary in size with the sensitivity of the tax revenues to upswings in the economy.
- (3) vary in size depending upon the latitude of welfare entitlement programs during economic downturns.
- (4) are reflections of the degree of stimulus embodied in monetary policy.
- (5) are described by none of the above.

2. Cyclical deficits are:

- (1) the products of discretionary fiscal policy.
- (2) the appropriate reflection of the stimulative character of fiscal policy.
- (3) dependent in part on the automatic stabilizers built into the macroeconomy.
- (4) never considered until strict monetary control raises the specter of crowding out.
- (5) none of the above.

3. A \$50 billion increase in defense spending is an example of:

- (1) monetary policy directed at reducing inflation.
- (2) fiscal policy directed at reducing inflation.
- (3) fiscal policy that would contribute directly to increasing the structural deficit.
- (4) fiscal policy that would contribute directly to increasing the cyclical deficit.
- (5) none of the above.

4. Which answer to question 3 would have been correct had that question asked about an increase in tax revenues caused by a growing economy and a progressive income tax?

- (1).
- (2).
- (3).
- (4).
- (5).

5. Which answer to question 3 would have been correct if the question had asked about an open-market operation that purchased bonds?

- (1).
- (2).
- (3).
- (4).
- (5).

6. Deficits in the early 1980s were enormous, in part, because the Reagan administration:

- (1) pursued expansionary fiscal policy with high structural deficits.
- (2) received the tight monetary policy that it wanted.

- (3) suffered a recession that enlarged the cyclical deficit.
- (4) did all the above.
- (5) did none of the above.

7. In the face of a stagnant economy, a government should:

- (1) spend more, tax less, and/or pursue a contractionary monetary policy.
- (2) spend less, tax less, and/or pursue an expansionary monetary policy.
- (3) spend more, tax less, and/or pursue an expansionary monetary policy.
- (4) tax more, spend less, and/or pursue an expansionary monetary policy.
- (5) do nothing and rely on the ability of the economy to rapidly return to potential GNP just as it did in the 1983 recovery.

8. Which of the following characterizes the Carter policy to stimulate investment that was tried in the late 1970s?

- (1) Faster monetary growth, spending growth, and lower taxes.
- (2) Lower spending, slower monetary growth, and lower taxes.
- (3) Faster money growth, stable spending, and higher taxes.
- (4) Faster money growth, lower spending, and lower taxes.
- (5) None of the above.

9. The linkage between government spending that could lead to the crowding out of private investment is best outlined by a causal connection from spending growth to:

- (1) output growth, to an increase in the assets demand for money, and eventually to higher interest rates, which cause reduced investment.
- (2) output contraction, to an increase in the transactions demand for money, to a lower assets demand for money, and finally to lower interest rates, which encourage more investment.
- (3) output growth, to an increase in the transactions demand for money, to a lower assets demand for money, and finally to higher interest rates, which cause reduced investment.
- (4) output growth and to higher investment with higher transactions and assets demands for money.
- (5) none of the above.

10. Strict monetarists believe in a vertical aggregate supply schedule. They believe, as a result, that every increase in government spending of one dollar should cause private investment to fall by:

- (1) 50 cents.
- (2) 75 cents.
- (3) 90 cents.
- (4) \$1.
- (5) none of the above.

11. According to a monetarist, monetary policy and fiscal policy differ in what way?

- (1) Monetary policy should be deliberately operated in the short run in an effort to keep GNP in the full-employment region, whereas fiscal policy cannot have anything but minor effects on the GNP level.
- (2) Monetary policy deals with the amounts of money spent and collected by the government, whereas fiscal policy deals with interest rates.
- (3) Monetary policy seeks to encourage or discourage investment (*I*) and consumption (*C*) spending by business firms and private citizens by influencing interest rates and credit availability, whereas fiscal policy operates directly upon the level of public spending through spending and taxation.
- (4) Fiscal policy works principally through changes in the level of investment, whereas monetary policy has little or no effect on investment.
- (5) There is no essential difference between them at all, since they differ only in that they are administered by two different agencies.

12. In terms of the saving-investment diagram used extensively in earlier chapters, the introduction of a tight-money policy by the Federal Reserve would be intended to:

- (1) lower both the investment (*I*) and savings (*S*) schedules and hence lower GNP
- (2) raise the *I* schedule and hence lower GNP.
- (3) raise the *I* schedule and hence raise GNP.
- (4) lower the *S* schedule and hence raise GNP.
- (5) lower the *I* schedule and hence lower GNP.

13. The crude quantity theory of money assumes:

- (1) that both *V* and nominal GNP are fixed.
- (2) that both *V* and real GNP are fixed.
- (3) that only *V* is fixed.
- (4) that *V* and the price level are fixed.
- (5) none of the above.

14. Monetarists believe:

- (1) that the money supply determines nominal GNP in the short run.
- (2) that the money supply determines prices in the long run.
- (3) that fiscal policy is essentially ineffective.
- (4) that market forces will maintain potential GNP in the long run.
- (5) all the above.

15. The lessons of the past decade or so include which of the following?

- (1) Strict adherence to money-supply growth targets can cause substantial unemployment.
- (2) The Keynesian view is entirely wrong.
- (3) There is nothing to the monetarist view of the world that should be accepted in constructing policy.
- (4) Money matters, but so does fiscal policy.
- (5) Answers (1) and (4).

16. The basic assumptions of rational-expectations macroeconomics include;

- (1) a presumption that people form their expectations about the future efficiently and rationally.
- (2) a presumption that prices are extremely flexible in both directions.
- (3) a presumption that wages are extremely flexible in both directions.
- (4) all the above.
- (5) answers (1) and (3) only.

17. It follows from the assumptions of rational expectations that:

- (1) most unemployment is voluntary.
- (2) monetary policy can work in the short run but not in the long run.
- (3) fiscal policy can affect the long term but not the short term because of delays in Congress.
- (4) any policy might work independent of the circumstance.
- (5) none of the above are correct.

18. It follows from the assumptions of rational expectations that a reduction in taxes to stimulate consumption:

- (1) would work as advertised.
- (2) would not work unless accompanied by accommodating monetary policy.
- (3) would not work because people would save their tax break in anticipation of future higher taxes.
- (4) might work unless there were substantial leakages into foreign markets.
- (5) would involve none of the above.

19. According to rational-expectations macroeconomics, the short-run Phillips curve is effectively:

- (1) horizontal.
- (2) positively sloped.
- (3) vertical.
- (4) negatively sloped.
- (5) sloped in either direction depending upon conditions.

20. The observed slope in the short-run Phillips curve is explained by rational-expectations macroeconomics in terms of:

- (1) cost-of-living contracts.
- (2) inherent instability.
- (3) the effects of monetary policy only.
- (4) the vagaries of the uncertain international market.
- (5) all the above.

Answer all questions. Be concise and complete, and answer as rigorously as you are able.

(30%)

1. Answer the following statements as true, false, or uncertain. Defend your answer briefly, but clearly.

Undefended answers are not acceptable.

(a) Convex preference means that "average are preferred to extremes."

(b) If leisure is an inferior good, then the labor supply curve would be backwards sloping after a certain wage rate.

(c) Taking a monotonic transformation of a utility function doesn't change the marginal rate of substitution.

(d) Taking a monotonic transformation of a utility function doesn't change the law of diminishing marginal utility.

(e) The following utility function has the expected utility property:  $u(c_1, c_2, \pi_1, \pi_2) = \pi_1 c_1 + \pi_2 c_2^2$

(f) The following production function exhibits increasing returns to scale:  $f(x_1, x_2) = 4x_1^{\frac{1}{2}} x_2^{\frac{1}{3}}$

(15%)

2. Analyze the following market phenomena:

(a) For most amusement parks, there is one price for admission, and then another price for the attractions inside.

(b) The regulatory agency set price caps for public utilities' pricing.

(c) Accountants usually charge lower to the individuals than to the corporates.

(20%)

3. The utility function for two commodities  $x_1$  and  $x_2$  is

$$u(x_1, x_2) = \alpha \ln(x_1 - \delta_1) + \beta \ln(x_2 - \delta_2)$$

(a) For the above utility function, if  $\alpha = \beta = 0.5$ ,  $\delta_1 = 10$ ,  $\delta_2 = 20$ , derive the demand function for  $x_1$  in terms of  $m$ ,  $p_1$ ,  $p_2$  (where  $m$  is income,  $p_1$  and  $p_2$  are prices for  $x_1$  and  $x_2$ ).

(b) Derive the price effects on the demand for  $x_1$  ( $\frac{dx_1}{dp_1}$ ) and income effects on the demand for  $x_1$  ( $\frac{dx_1}{dm}$ ).

(c) Explain whether  $x_1$  is normal good or inferior good.

Explain whether  $x_1$  and  $x_2$  are substitute goods or complementary goods.

(d) Write up Slutsky Equation and explain the components of this equation.

(20%)

4. A firm's long-run total cost curve can be represented as follows:

$$TC = \alpha_0 Q^{\alpha_1} P_L^{\alpha_2} P_K^{\alpha_3}$$

where  $TC$  is the firm's total cost,  $Q$  is its output,  $P_L$  is the price of labor, and  $P_K$  is the price of capital.

(a) What is the measure of  $\alpha_1$  represented?

(b) If  $\alpha_1 < 1$  or  $\alpha_1 > 1$ , does it indicate any difference in the production process?

(c) How would the  $\alpha$ 's be estimated by a simple regression?

(15%)

5. Discuss the technological factors that would be harnessing generic industrial policies for promoting the productivity growth, technological changes and competitiveness for individual specific industry.

\*\*\*全部作答，每題 20 分，五題共 100 分，作答請橫寫\*\*\*

1. Let  $X$  be continuous random variable with density function

$$f_X(x) = \frac{3x^2}{2}, -1 \leq x \leq 1. \text{ Let } U = X^2. \text{ Please find the density function for } U. \text{ ( Note that it is very important to give the range of } U; \text{ the definition is not complete without it. )}$$

2. Let  $(X, Y)$  be a continuous random vector with  $f(x, y) = 8xy, 0 < x < y < 1$ . Please find (1) the marginal density of  $X$ , (2) the conditional density of  $X$  given  $Y=y$ , (3)  $E(X|Y=y)$ , and (4)  $\text{Var}(X|Y=y)$ .

3. Let  $X = (X_1, X_2, X_3)'$  have a trivariate normal distribution with means 6, 4, and 2 and variance 16, 25, and 64, and with  $\text{cov}(X_1, X_2) = 6$  and  $\text{cov}(X_1, X_3) = \text{cov}(X_2, X_3) = 0$ . Let  $Y_1 = 2X_1 + 3X_2 + X_3 + 2$ ,  $Y_2 = 4X_1 + X_3 + 2$ , What is the joint distribution of  $Y = (Y_1, Y_2)'$  ?

4. State briefly about what " *Central Limit Theory* " is. ( No more than 100 words ).

5. Let  $X_1, \dots, X_n$  be independent, with  $X_i$  geometrically distributed with parameter  $\theta$ . That is,  $X_i$  has density  $f(x; \theta) = \theta(1-\theta)^x, x = 0, 1, \dots, 0 < \theta < 1$ . Please find the MLEs ( Maximum Likelihood Estimators ) of  $\theta$  and  $(1-\theta)^{-1}$ .

一、選擇題 (25 分，每一小題 2.5 分，沒倒扣)

1. An increase in demand means that consumers will purchase a \_\_\_\_\_ quantity at a given price, or will pay a \_\_\_\_\_ price for a given quantity.  
(a) larger; higher  
(b) larger; lower  
(c) smaller; higher  
(d) smaller; lower
2. Demand is said to be inelastic if price elasticity of demand is \_\_\_\_\_ in absolute terms, and elastic if \_\_\_\_\_.  
(a) greater than one; less than one  
(b) less than one; greater than one  
(c) greater than zero; less than zero  
(d) less than zero; greater than zero
3. Consider a company that can produce both word processors and typewriters. A decrease in the demand for typewriters can be expected to \_\_\_\_\_ the price of typewriters and \_\_\_\_\_ the supply of word processors.  
(a) decrease; increase  
(b) increase; increase  
(c) decrease; decrease  
(d) increase; decrease
4. A perfectly competitive firm has no control over the price it receives for its product because:  
(a) it sells a small share of the market.  
(b) it sells a homogeneous product.  
(c) it cannot earn a pure profit.  
(d) a and b.
5. Marginal revenue for an imperfectly competitive firm is \_\_\_\_\_ than price. For a perfectly competitive firm, it is \_\_\_\_\_ price.  
(a) less than; equal to  
(b) equal to; less than  
(c) less than; greater than  
(d) greater than; less than

6. The unemployment rate is determined by dividing the \_\_\_\_\_ by the \_\_\_\_\_ and multiplying by 100.
- (a) population; number of unemployed
  - (b) labor force; number of unemployed
  - (c) number of unemployed; population
  - (d) number of unemployed, labor force
7. The real rate of interest equals the \_\_\_\_\_ rate minus the \_\_\_\_\_ rate.
- (a) inflation; nominal
  - (b) nominal; inflation
  - (c) inflation; CPI
  - (d) CPI; nominal
8. Gross national product (GNP) is the total value of \_\_\_\_\_ in the economy during a given year.
- (a) sales
  - (b) final goods and services produced
  - (c) consumer goods produced
  - (d) investment goods produced
9. Under a regressive tax:
- (a) low-income people pay a larger proportion of their income as taxes than high-income people.
  - (b) Low-income people pay more total taxes than those with high incomes.
  - (c) High- and low-income people pay the same percent of their income as taxes.
  - (d) a and b.
10. The consequence of printing money to finance deficits is:
- (a) unemployment.
  - (b) Inflation.
  - (c) deflation.
  - (d) stagflation.

二、問答題 (15 分)

- (a) Why is the MC curve also a supply curve?  
(b) What portion of the MC curve is supply?

三、問答題 (15 分)

For some goods, such as rooms at summer resorts, both price and quantity increase during certain times of the year. For other products, such as fresh strawberries, price is negatively correlated with quantity. Why does price increase when quantity increases for one good while price decreases when quantity increases for the other?

四、問答題 (15 分)

- (a) Compare the profit-maximizing price and quantity for a monopoly with the values in a perfectly competitive industry. Assume the same marginal cost and demand for both.  
(b) In attempting to maximize profits, do owners of a monopoly act differently than owners of perfectly competitive firms? Explain.

五、問答題 (15 分)

Explain:

- (a) The difference between the nominal rate of interest and the real rate of interest.  
(b) Why the real rate of interest can be negative, and when this is most likely to occur.

六、問答題 (15 分)

- (a) According to the quantity theory of money, what is the leading cause of inflation?  
(b) Is this theory consistent with the evidence? Explain.



說明:1 本考試共五題, 每題 20 分。

2 回答時, 要註明題目號碼, 不必按照題目次序回答; 不必抄題目。

1. 在前年東亞金融風暴中, 新台幣曾貶值高達 1 元美金折換新台幣 34 元左右。回答下列二個問題:
  - 1.1 我國中央銀行採取什麼干預政策以穩定新台幣?
  - 1.2 穩定新台幣幣值對我國經濟有何好處?
2. 民國 50 與 60 年代, 台灣實行農業與工業的平衡發展, 說明所實施的一些具體方案。
3. 在過去 30 年至 40 年間, 經濟發展經常爭論的課題, 自由學派主張市場競爭, 另一學派則主張政策的功能。自前年發生金融風暴後, 大都的共識是二者都應兼重, 才能促進經濟發展。請評論。
4. 國際機構非常關心 21 世紀的全球發展, 評述重要的五種策略發展。
5. 台灣受到東亞金融風暴的影響, 去年經濟不景氣, 出口不振, 因而提出擴大內需方案, 以振興經濟。說明其政策措施。