

# 國立中山大學 104 學年度碩士暨碩士專班招生考試試題

科目名稱：經濟學【財管系碩士班】

題號：443001

※本科目依簡章規定「不可以」使用計算機(混合題)

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經濟學[財管系碩士班]試題共有兩部份，兩部份總計共 100 分。

第一部份：總體經濟，五十分

選擇題，單選，每題三分，共四十五分

1. Which of the following is a transfer payment?
  - a) the wages paid to government employees
  - b) the government's payment to a constructor for building a bridge
  - c) the government's payment to foreign countries for arms purchase
  - d) regular pension payments to retired government employees
2. Who among the following is likely to have the highest marginal propensity to consume out of current income?
  - a) a rational consumer who intends to behave strictly according to the permanent income hypothesis
  - b) a risk averse consumer facing a high degree of uncertainty
  - c) a low-income consumer facing borrowing constraints
  - d) a working age consumer looking forward to retirement
  - e) a wealthy person who is currently accumulating funds to leave to his heirs
3. The economy's IS curve has a downward slope because
  - a) when output is too high, firms cut investment to reduce inventory
  - b) as income rises, consumption rises and saving falls
  - c) as interest rates rise, investment decreases
  - d) as uncertainty increases, saving rises and consumption falls
  - e) as government purchases rise, interest rates fall
4. If a government aims to raise inflation by printing money, does it help to reduce the burden of government debt?
  - a) Yes, it helps to reduce the debt/GDP ratio if the debt is denominated in home currency
  - b) Yes, it helps to reduce the debt/GDP ratio if the debt is denominated in a foreign currency
  - c) Yes, high inflation reduces the nominal value of existing debt
  - d) Yes, high inflation reduces the nominal interest payments on existing debt
  - e) Yes, high inflation makes issuing new debt cheaper in nominal value
5. Sterilized intervention in the foreign exchange market is defined as
  - a) Intervention that is offset by open market operations that leave the monetary base unchanged
  - b) Intervention that is ineffective
  - c) Intervention that leaves the stock of foreign assets held by the Central Bank unchanged
  - d) Intervention that is to leave the exchange rate unchanged
6. Comparing the GDP of U.S. and China by Purchasing Power Parity exchange rates rather than market exchange rates
  - a) Exaggerate the difference between U.S. and China since U.S. has greater purchasing power
  - b) Should adjust for differences in country sizes
  - c) Makes GDP calculations more volatile over time
  - d) Reduces the difference between U.S. and China because in China a given amount of dollars purchases more goods and services.
7. Which of the following countries has the highest gross government debt to GDP ratio in recent years?
  - a) Italy
  - b) Brazil
  - c) China

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- d) Japan  
e) U.S.
8. An economy in which  $GDP = 900$ ,  $C = 600$ ,  $T = 100$ ,  $I = 100$ ,  $G = 300$  must have
- exports equal to imports
  - a sum of private saving and public saving to be equal to 0
  - a financial account deficit of 100
  - net exports of 100
9. According to the permanent income hypothesis, which of the following should raise current consumption the most?
- a lottery prize of \$1,000
  - an unexpected year-end bonus of \$1,000
  - a temporary tax cut of \$1,000
  - an increase of \$1,000 in annual salary
  - an inheritance of \$1,000
10. In most industrial economies, the largest component of national income is
- wages and salaries
  - corporate profits
  - interest on bank accounts and bonds
  - rental income
11. As the demand for money declines,
- the IS curve shifts outward
  - the LM curve shifts inward
  - the velocity of money will adjust to keep output constant
  - interest rates will fall and output will increase
  - interest rates will rise and investment will decline
12. Central banks in developed countries commonly aim to keep the price level
- declining slightly
  - constant
  - growing by about 1% per year
  - rising by about 2% per year
  - increasing by about 5% per year
13. The amount of monetary base is equal to
- gold
  - gold plus foreign exchange reserves
  - gold plus foreign exchange reserves plus government bond holdings
  - coins, currency, and demand deposits
  - currency in circulation and bank reserves
14. A reduction in the marginal propensity to save would shift
- the IS curve downward
  - both the IS curve and the aggregate demand curve outward
  - the LM curve inward
  - both the LM curve and the aggregate demand curve inward
  - the aggregate demand curve inward

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15. According to the new classical macroeconomics which assumes rational expectations, there is no need for government macroeconomic policies to stabilize the economy. Which in the following is not a reason consistent with the new classical macroeconomics?
- The government cannot know surprises to aggregate demand in advance
  - If the shock to aggregate demand is anticipated, labor market will adjust to keep full employment
  - If the shock to aggregate demand is a surprise, labor market will adjust to return full employment afterwards
  - The government knows the surprises to aggregate demand beforehand, and it spreads the information to the public and let the labor market adjust to keep full employment

計算題，共五分（寫出答案即可，勿寫算式）：

- An economy has a potential output of 90 and current actual output of 100. The current tax revenue is 50 and government deficit is zero. What is the structural fiscal deficit or surplus if the point elasticity of tax revenue with respect to output is 0.5 while the point elasticity of government spending with respect to output is -0.25? (3 points)
- Suppose  $C = 6,000 + 0.75(Y - T)$ ,  $I = 4,000$ ,  $G = 2,000$ , and  $T = 0.2Y$ . At the equilibrium level of output,  $G - T = ?$  (2 points)

第二部分(個體經濟學)填空題答案全對才給分。只需要填入最後的完整答案，”請勿”寫出計算過程。答案卷請製作如下：

(1)	(2)	(3)
(4)	(5)	(6)
(7)	(8)	(9)
(10)		

第二部份個體經濟學：共 10 格，每一格 5 分，共計 50 分。

- Suppose that Robinson Crusoe produces and consumes fish ( $F$ ) and coconuts ( $C$ ). Assume that during a certain period he has decided to work 200 hours and is indifferent as to whether he spends this time fishing or gathering coconuts. Robinson's production for fish is given by  $F = \sqrt{l_f}$ ; and for coconuts by  $C = \sqrt{l_c}$ ; where  $l_f$  and  $l_c$  are the number of hours spent fishing or gathering coconuts. Consequently,  $l_f + l_c = 200$ ; Robinson Crusoe's utility for fish and coconuts is given by:  $U = \sqrt{F * C}$ ;
  - If Robinson cannot trade with the rest of the world, how will the optimal levels of  $F$  and  $C$ ? ( $F^*$ ,  $C^*$ ) (1)
  - Now suppose that trade is opened and Robinson can trade fish and coconuts at the price ratio of  $P_f/P_c = 2/1$ . If Robinson continues to produce the quantities of  $F$  and  $C$  in part (a) what level of  $F$  and  $C$  ( $F'$ ,  $C'$ ) will he choose to produce, given the opportunity to trade? ( $F'$ ,  $C'$ ) (2)
- Consider the "Tragedy of the Commons" model- that individuals ( $n$ ) acting independently and rationally according to each's self-interest, behave contrary to the best interests of the whole group. Consider the case of two individual firms ( $n = 2$ ). Assume that unit cost is  $c = 20$  and assume the production function ( $v$ ) is  $v(G) = 200 - 0.5 G^2$ . Where  $G$  is total output,  $g_1$  and  $g_2$  are firm 1 as well as firm 2 output, respectively; and of course,  $G = g_1 + g_2$ .
  - Under Nash equilibrium production ( $G^*$ ), identify the Nash equilibrium ( $g_1^*$ ,  $g_2^*$ ). (3)
  - What is the collective social optimum ( $G^{**}$ )? (4)

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3. Assume a person gains utility from both money income  $W$  and leisure time  $L$ , and has the utility function  $U = W^{1/2} L^{1/2}$  which represents preferences about relative bundles and about risks associated with those bundles (i.e., it is a VonNeumann-Morgenstern utility function). Suppose the person has  $W = \$400$  and  $L = 100$ .

a. A lottery ticket is available that might pay zero when loss, and might pay \$500 when win. Assume the chance of winning is  $\pi$ , for this person to be willing to pay \$5 for the ticket, how much of the income ( $W$ ) when the person win the lottery, and how much of the income for the loss? (win, loss) (5)

b. Now forget the lottery ticket. Consider a more important gamble in life: Suppose there is a 2% chance of the person being vocationally disabled. If the disability does occur, income will drop to \$36, and leisure will increase to 225. What is the utility of disability person in this case? (6) If this person wants to by a insurance for a "Disability Insurance policy", how much premium would he/she be willing to pay that would replace the lost income in case of disability? (7)

4. The possible effects of global warming, arid of attempts to avoid it, are likely to have very different effects on different countries in terms of both benefits and costs. The nature of international competition and cooperation always involves significant strategizing, and this applies to global warming management as well. The assignment in this question is to use a game theory approach to illustrate some of the issues involved, For simplicity, assume there are 2 players (2 countries with common interests), which we will call A and B. Suppose there are two general approaches to dealing with the global warming threat: strict carbon emission controls, and lax carbon emission controls. Suppose the benefits and costs of controls in the possible cases are the following:

If A is strict and B is strict:

Costs to A are 1000 and costs to B are 600; benefits to A are 1200 and benefits to B are 1800.

If A is strict and B is lax:

Costs to A are 1000 and costs to B are zero; benefits to A are 500 and benefits to B are 400.

If A is lax and B is strict:

Costs to A are zero and costs to B are 600; benefits to A are 500 and benefits to B are 400.

If A is lax and B is lax:

Costs to both are zero: benefits to both are zero.

a. Consider this static game in pure strategies: If the two countries choose strategies simultaneously and with perfect knowledge of the other's actions, what will be the optimal outcome for A and B? (8)

b. Consider a dynamic game in pure strategies; if international politics commend that A must act first and B will be follow, what will be the likely outcome? (9)

c. Consider the possibility of a game with the possibility of mixed strategies; in reality, the countries might not have to commit to a given strategy, but could strategically introduce uncertainty about their intentions. In a static game with the possibility, how would be the country A possibility distribution of (strict, lax)? (10)