

國立中山大學 106 學年度金融創新產業碩士專班招生考試試題

科目名稱：經濟學

題號：

※本科目依簡章規定「不可以」使用計算機，以下題目包括兩部分，共有單選題及填充題。(請直接寫出答案，不要列出計算過程)

Part I. Single choice question (40 %):

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

(1) Use the following two statements to answer this question:

I. The average cost curve and the average variable cost curve reach their minima at the same level of output.

II. The average cost curve and the marginal cost curve reach their minima at the same level of output.

- A) Both I and II are true.
- B) I is true, and II is false.
- C) I is false, and II is true.
- D) Both I and II are false.

(2) If Ashton has his utility function of  $U = \text{Min}(2X, Y)$ , where X is coffee (cup), and Y is milk (tea spoon) must be added. He has income \$100, the price of coffee/cup is \$10, and price of milk/cup is \$1. Find Ashton optimal consumption of  $(X^*, Y^*)$ .

- A)  $(\frac{100}{12}; \frac{200}{12})$ .
- B)  $(\frac{100}{13}; \frac{150}{13})$ .
- C) (4 ; 8)
- D) (6 ; 10)

(3) Producer surplus is measured as the

- A) area under the demand curve above market price.
- B) entire area under the supply curve.
- C) area under the demand curve above the supply curve.
- D) area above the supply curve up to the market price.

(4) What is one difference between the Cournot and Stackelberg models?

- A) In Cournot, both firms make output decisions simultaneously, and in Stackelberg, one firm sets its output level first.

- B) In Stackelberg, both firms make output decisions simultaneously, and in Cournot, one firm sets its output level first.
- C) In Cournot, a firm has the opportunity to react to its rival.
- D) Profits are zero in Cournot and positive in Stackelberg.

5) If “*we*” represents a two-period consumer's lifetime wealth and “*r*” denotes the real rate of interest, the slope of the consumer's budget line is equal to

- A)  $-\frac{1}{(1+r)}$
- B)  $r \times we$
- C)  $-\frac{r}{(1+we)}$
- D)  $-(1+r)$

(6) The aggregate demand curve

- A) shifts rightward when the price level increases and leftward when the price level falls.
- B) shifts rightward when taxes are decreased.
- C) shifts rightward when foreign incomes decrease and shifts leftward when foreign incomes increase.
- D) does not shift, unlike market demand curves.

(7) Suppose a nation has no income taxes or imports consideration. The marginal propensity to consume (MPC) equals 0.75. What does the expenditure model predict will be the change in real GDP if investment increases by \$150 billion?

- A) \$112.5 billion.
- B) \$400 billion.
- C) \$600 billion.
- D) \$150 billion.

(8) Suppose the economy is in a recession and the Fed lowers the federal funds rate. Then

- A) real GDP and the price level will both decrease.
- B) real GDP will increase and the price level will decrease.
- C) real GDP will decrease and the price level will increase.
- D) real GDP and the price level will both increase.

(9) The short-run Phillips curve shows the \_\_\_\_\_ relationship between \_\_\_\_\_.

- A) negative; unemployment and real GDP
- B) positive; unemployment and real GDP
- C) negative; inflation and unemployment
- D) positive; real GDP and inflation

(10) An agreement among countries to adopt a common currency is called a

- A) central bank consolidation.

- B) currency union.
- C) common banking treaty.
- D) monetary compact.

Part II. Fill in the following blanks (60 %):

(11)	(12)	(13)	(14)	(15)	(16)
(17)	(18)	(19)	(20)	(21)	(22)

1) Suppose Dr. Hsu is in charge of a toll bridge that costs essentially nothing to operate. The demand for bridge crossings  $Q$  is given by  $Q = 30 - 2P$ , where  $P$  is the price bridge toll.

- A) How many people would cross the bridge if there were no toll? (11)
- B) Find the change of consumer surplus associated with the increase in the price of the toll from \$5 to \$7? (12)

2) Assume Kaohsiung Eda Theme Park sells day pass (ticket) and night pass (ticket). The fixed cost (FC) for each pass is NT \$6,000, variable cost (VC) is NT \$50. The demand function for day pass is given by  $P_d = 2050 - 5Q_d$ ; while demand function for night pass is given by  $P_n = 1550 - 25Q_n$ .  $P_d$  and  $P_n$  is the price for day pass and night pass, respectively.  $Q_d$  and  $Q_n$  is the visitors for day pass and night pass.

- A) You are the Park manager, decide the pass price ( $P_d$ ), quantity of sales ( $Q_d$ ), and the profits ( $\pi_d$ ) in day pass. (13)
- B) Decide the pass price ( $P_n$ ), quantity of sales ( $Q_n$ ), and the profits ( $\pi_n$ ) in night pass. (14)

3) Suppose you are a duopolist producer of a homogeneous good. Both you and your competitor have zero marginal costs. The market demand curve is

$$P = 30 - Q$$

where  $Q = Q_1 + Q_2$ .  $Q_1$  is your output and  $Q_2$  your competitor's output. Your competitor has also read this question.

- A) Suppose you will play this game only once. If you and your competitor must announce your outputs at the same time, how much  $Q_1$  will you choose to produce? How much  $\pi_1$  you expect your profit to be? ( $Q_1; \pi_1$ ) = (15)
- B) Suppose you are told that you must announce your output before your competitor does. How much  $Q_1^*$  will you produce in this case, and how much do you think your

competitor  $Q_2^*$  will produce?  $(Q_1^*; Q_2^*) = (16)$ . How much would you pay for the option of announcing either first or second?  $(17)$

4) You are given the IS-LM model with an initial equilibrium. Using the IS-LM model to determine the changes (increase, decrease, not changed) in the indicated variables ( income  $Y$ , interest rate  $r$ , and consumption  $C$ ) in the following cases.

A) An increase in taxes.  $(Y; r; C) = (18)$

B) A fall in the price level.  $(Y; r; C) = (19)$

5) Using first the aggregate supply and demand framework, and the expectations-augmented Phillips Curve, determine the effects of an initially unexpected, once-and-for-all increase in  
A) An increase in the level of the money supply (using AD-AS model). What will income and price change (increase, decrease, not changed) in the long run?  $(20)$

B) An increase in the rate of growth of the money supply (using Phillips Curve model). What will unemployment and inflation change (increase, decrease, not changed) in the long run?  
 $(21)$

6) Country A and country B both have the production function  $Y = F(K, L) = K^{1/2}L^{1/2}$ .  $K$  is capital and  $L$  is labor. What is the per-worker production function,  $y=f(k)$  for Country A and B, respectively?  $(22)$

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