

國立中央大學 105 學年度碩士班考試入學試題

所別： 財務金融學系 碩士班 甲組(一般生)

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財務金融學系 碩士班 乙組(一般生)

科目： 經濟分析

本科考試禁用計算器

*請在答案卷(卡)內作答

一、選擇題 (共 5 題，每題 3 分)

1. According to the permanent-income hypothesis, if consumers receive a one-time income bonus, then they will:
A) not alter their consumption or saving in the current year.
B) spend most of it in the current year.
C) save most of it in the current year.
D) spend one-half of it and save one-half of it in the current year.
2. In a small open economy, starting from a position of balanced trade, if the government increases the income tax, this produces a tendency toward a trade _____ and _____ net capital outflow.
A) deficit; negative
B) surplus; positive
C) deficit; positive
D) surplus; negative
3. Along a short-run aggregate supply curve, output is related to unexpected movements in the _____. Along a Phillips curve, unemployment is related to unexpected movements in the _____.
A) price level; inflation rate
B) inflation rate; price level
C) unemployment rate; price level
D) price level; level of output
4. If the Fed announces that it will decrease the money supply in the future but does not change the money supply today:
A) both the nominal interest rate and the current price level will increase.
B) the nominal interest rate will increase and the current price level will decrease.
C) the nominal interest rate will decrease and the current price level will increase.
D) both the nominal interest rate and the current price level will decrease.

注意：背面有試題

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5. Suppose we know that, in Country X, 10 million workers are unemployed, 190 million workers are employed, and the adult population equals 300 million, then the unemployment rate equals approximately _____ percent.

- A) 3.33 B) 5.26 C) 5.00 D) 9.09

二、計算問答題 (請依題序作答，未列算式、推理過程或適當說明者，不予計分)。

1. 某消費者的效用函數為 $u(x, y) = x^{0.4}y^{0.6}$ ， x 與 y 分別代表兩個財貨。假設該消費者有 100 元，且 x 與 y 的價格分別為 2 元與 3 元，請問
 - (1) 該消費者對 x 與 y 的最適需求量為何? (8%)
 - (2) 如果該消費者的所得上升，對其最適決策的影響為何? (8%)
2. 假設某經理人為期望效用極大化者，其面臨兩個投資方案：方案 A 有 50% 的可能性獲得 100 萬的收益，50% 的可能性損失 20 萬；方案 B 則有 50% 的可能性獲得 80 萬的收益，50% 的可能性沒有獲利也沒有損失。如果經理選擇方案 B，表示該經理的效用函數有何性質? (10%)
3. 某投資人面臨資產配置的決策，假設其有 w_0 元的資金，其打算投資 α 元在風險性的資產上，剩下來的資金投資在無風險資產上， $\alpha \in [0, w_0]$ 。令 \tilde{x} 表示風險性資產的報酬率，其為一個隨機變數，令 r 表示無風險性資產的報酬率，其為一個常數。該投資人為期望效用極大化者，且其效用函數為 $u(w) = 100 - \exp(-w)$ ，其中 w 為其財富水準。請問：
 - (1) 請問應如何決定該投資人的最適資產配置? (5%)
 - (2) 請問風險性資產的報酬率滿足何種條件時，會使得該投資人的最適資產配置為 $\alpha = 0$? (5%)
 - (3) 假設該投資人的可投資金額 w_0 上升，請問 α 的最適值有何影響? (4%)
4. 在 Stackelberg model 中，假設 A、B 兩個公司產品均為同質，其中 A 公司為領導廠商。假設市場的需求函數為 $P = 100 - Q$ ，其中 P 為價格， Q 為需求量。A 公司的生產成本為 $20q_A$ ，B 公司的生產成本為 $20q_B + 410$ ， q_i 表示 i 公司的生產量， $i = A, B$ 。請問：均衡時兩公司的產量為何? (10%)

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5. Suppose you divide your life into two periods-working age and retirement age. When you work, you earn labor income Y ; when retired, you earn no labor income, but must live off your savings and the interest it earns. You have no initial assets. You save the amount S while working, earning interest at rate r , so you have $(1 + r)S$ to live on when retired. Suppose your consumption when working is as much as your consumption when retired.
- (a) Suppose you earn \$ 4.2 million over your working life, and the real interest rate for retirement saving is 10%. How much will you save, and how much will you consume in each part of your life? (5 分)
- (b) Suppose your current income decreases to \$2.1 million when working. Now what will you save and how much will you consume each period? (5 分)
- (c) Suppose a system of labor insurance will pay you 50% of your working income when you are retired. Now (with $Y = \$4.2$ million as in part (a)) how much will you save and how much will you consume each period? (5 分)
6. Consider two countries that are otherwise identical (have the same saving rates and depreciation rates), but the population of Country Large is 200 million, while the population of Country Small is 20 million. Use the Solow model with no technological change to answer the following questions:
- (a) Which country would have a higher steady-state level of output per worker, if the population growth rates are the same in the two countries? Explain your answer. (5 分)
- (b) Which country would have a higher steady-state level of output per worker, if the population growth rate is higher in Country Large? Explain your answer. (5 分)
7. Suppose the government decides to decrease government expenditure as a means to cut the existing government budget deficit. Assume the economy is at its long-run equilibrium. Use the aggregate demand and supply (AD-AS) analysis to explain the short- and long-run consequences of this policy. (10 分)