

國立中央大學99學年度碩士班考試入學試題卷

所別：產業經濟研究所碩士班 產業經濟組（一般生） 科目：總體經濟學 共 4 頁 第 1 頁

本科考試禁用計算器

*請在試卷答案卷（卡）內作答

請依序於答案卷上作答，違者扣分。

一、單選題(50%)：每題 5%

1) In the national income accounts, investment does NOT necessarily include:

- a. The purchase of new plants and machinery by businesses.
- b. The purchase of new houses by families and by landlords.
- c. The purchase of stocks on the Taiwan Stock Exchange.
- d. Increases in businesses' inventories of goods.
- e. None of above.

2) During periods of unexpected inflation, lenders are hurt while borrowers gain because:

- a. The ex-post real interest rate is higher than the ex-ante real interest rate.
- b. The ex-post real interest rate is lower than the ex-ante real interest rate.
- c. The real interest rate falls.
- d. The nominal interest rate falls.
- e. None of above.

3) According to the Phillips curve, the inflation rate depends on:

- a. Expected inflation and the level of aggregate demand relative to potential output.
- b. The money supply and the real interest rate.
- c. The stocks of labor and capital on hand for use in production.
- d. Menu costs and staggered wage and price setting.
- e. None of above.

4) The Golden Rule level of capital accumulation is the steady state with:

- a. the highest growth rate of output.
- b. the highest level of output per worker.
- c. the highest level of depreciation per worker.
- d. the highest level of consumption per worker.
- e. none of above.

5) In a small open economy with a floating exchange rate, fiscal policy

- a. has powerful effects on employment, but not on output or the exchange rate.
- b. has powerful effects on the exchange rate, but not on employment or output.
- c. has powerful effects on output, but not on employment or the exchange rate.
- d. has powerful effects on all three macroeconomic variables.
- e. none of above.



注意：背面有試題

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- 6) A difference between the economic long run and the short run is that:
- the classical dichotomy holds in the short run but not in the long run.
 - monetary and fiscal policy affect output only in the long run.
 - demand can affect output and employment in the short run, whereas supply is the ruling force in the long run.
 - prices and wages are sticky in the long run only.
 - none of above.
- 7) If a short-run equilibrium occurs at a level of output above the natural rate, then in the transition to the long run prices will _____ and output will _____.
- increase; increase
 - decrease; decrease
 - increase; decrease
 - decrease; increase
 - none of above.
- 8) The reason that the income response to a fiscal expansion is generally less in the IS-LM model than it is in the Keynesian-cross model is that the Keynesian-cross model assumes that:
- investment is not affected by the interest rate whereas in the IS-LM model fiscal expansion lowers the interest rate and crowds out investment.
 - the interest rate is fixed whereas in the IS-LM model it is allowed to vary.
 - investment is not affected by the interest rate whereas in the IS-LM model fiscal expansion raises the interest rate and crowds out investment.
 - investment is autonomous whereas in the IS-LM model fiscal expansion encourages higher investment, which raises the interest rate.
 - none of above.
- 9) All of the following are requirements for reducing inflation without causing a recession except:
- the plan must be believed by workers and firms.
 - workers and firms must form expectations rationally.
 - the plan must be announced before expectations are formed.
 - the government's budget must be balanced.
 - none of above.

參考用

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10) Assume that an economy has the Phillips curve $\pi = \pi_{-1} - 0.5(u - 0.06)$. How many percentage point-years of cyclical unemployment are needed to reduce inflation by 5 percentage points?

- a. 20
- b. 10
- c. 5
- d. 2.5
- e. none of above.

二、計算題(50%)：

11) (20%) Suppose a country has the following production function: $Y = K^{1/2}L^{1/2}$. Assume that the saving rate is 20%, the depreciation rate is 10%, and that there is no population growth or technological progress.

Using the Solow growth model, compute the steady state values of the following: (show your work)

- (a) (5%) Capital stock per person.
- (b) (5%) Consumption per person.
- (c) (5%) Real rental rate on capital.
- (d) (5%) Real wage rate.

12) (30%) Miss Chen lives for two periods. She has preferences over consumption streams c_0, c_1 of: $u(c_0, c_1) = \ln(c_0) + \beta \ln(c_1)$ where $0 < \beta < 1$. Miss Chen is endowed with one unit of time each period. In the first period, she can divide her time between working in a low-wage job at a wage of $w = 1$ or attending S hours of school. Miss Chen earns nothing while in school, but she is augmenting her human capital. In the second period of life, Miss Chen spends all of her time at her high-wage job, earning AK_1 where K_1 is her human capital and $A > 1$. Human capital is augmented by schooling by the simple formula $K_1 = S$, so given a choice for S , Miss Chen earns $1 - S$ while young and AS while old. There is no bond market.

The government is interested in helping Miss Chen go to school. It levies a lump-sum tax of G on Miss Chen when she is young and uses it to augment her human capital so that $K_1 = S + \theta G$ where $\theta > 0$.

Please answer the following questions:

- (a) (10%) Assume $G = 0$. Find Miss Chen's optimal schooling choice S and human capital K_1 .

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- (b) (15%) Assume $G > 0$. Find Miss Chen's optimal schooling choice S and human capital K_1 . What do you find if $\theta < 1$.
- (c) (5%) Now assume that the human capital augmentation is a straight subsidy from the government, that is, the government has taxed someone else to pay for Miss Chen's schooling, so she is not taxed at all while young. Now how do S vary with G ?

參考用

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