

國立暨南國際大學九十二學年度碩士班研究生入學考試試題

第 1 節 總體經濟學 適用: (經濟所 321)

(本試題共 2 頁, 第 1 頁)

考生注意: 1. 依次序作答, 只要標明題號, 不必抄題。

2. 答案必須寫在答案卷上, 否則不予計分, 並限以藍黑色筆作答。

3. 試題隨卷繳回。(餘詳詳閱試場規則)

1. (18%)

Consider an economy in which the aggregate production function can be represented by $Y = K^\alpha N^{1-\alpha}$,

with $0 < \alpha < 1$. Suppose that there is no technological progress nor population growth.

- Show that there are constant returns to scale and decreasing returns to each factor. Transform the aggregate production function into a relationship between output per capita and capital per capita.
- Provide an equation for the evolution of capital per head, and an equation for capital per head and output per head in steady state.
- Briefly explain the concept of the Golden Rule. Compute the saving rate corresponding to the Golden Rule in this economy.

2. (12%)

- What is neutrality of money?
- How is it related to the assumption that nominal wages and prices adjust instantaneously to clear the labor market?

3. (20%)

Consider the following demand for real money balance for an economy $M^d/p = k(Y/R)$, where R is nominal interest rate, P is the price level, Y is real GDP, k is a constant. During the year 2002, the economy's real GDP growth rate is 5%, money supply (M1B) growth rate is 7%, and nominal interest rate is 6%.

- If the nominal interest rate is constant, what is the inflation rate in 2002? And what is the real rate of interest?
- Suppose the economy's M1B money multiplier is about 4 and stable, what is this country's growth rate of monetary base?
- According to Taiwan's data, the income velocity of money is not a constant. Suppose the income velocity of money decreases at a rate -1%, what is the growth rate of nominal GDP? And what is the real rate of interest?
- (Continued from (c)) Now suppose that the economy's real GDP growth rate declines to 0%. If the central bank's objective is to stabilize the long-run price level, how should the money supply growth rate be changed to maintain the same growth rate of price level as in (a)?

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第 1 節總體經濟學 適用:(經濟所 321)

(本試題共 2 頁,第 2 頁)

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4. (5%)

What is the Lucas critique, and why was it so important to macroeconomists in the 1970's?

5. (15%)

Please use IS-LM and AD-AS diagrams to illustrate the effect of temporary increases in government purchases under Classical Model and Keynesian Model.

6. (15%)

Suppose the Central Bank has just learned that some foreign economies are headed for recession, which will reduce Taiwan's exports. This is an economic shock that shifts the IS curve down (left). What would you do in response to the shock if you want to keep the economy at full-employment equilibrium under each of the following case? Please use IS-LM-FE (full employment-output level) diagrams to explain.

(a) Real Business Cycle (RBC) model.

(b) Keynesian (efficiency wage) model.

(c) Misperception theory model.

7. (15%)

Suppose the economy is characterized by the following equations:

IS curve : $r = 20.20 - 0.002Y$

LM curve : $M/P = Y - 250(r + \pi^e)$

SRAS curve $Y = \bar{Y} + 100(P - P^e)$

The nominal money supply is $M = 19,800$

Expected inflation is $\pi^e = 0.20$, and full employment output is $\bar{Y} = 10,000$

(a) If the economy begins in general equilibrium, what are the equilibrium values of the price level, output, and the real interest rate?

(b) If the expected price level is the price level you found in part (a), what are the directions of changes of price level, output, and the real interest rate in the short run if there's an unanticipated decrease in the nominal money supply?