

科目：總體經濟學 適用：經濟所

編號：331

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。
3. 限用藍、黑色筆作答；試題須隨卷繳回。

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1. (10 points) Equilibrium in the asset market occurs when the quantity of money supplied equals the quantity of money demanded. Use this condition to analyze the relationship between the inflation and the growth rate of the nominal money supply.

2. (16 points) The government of a small open economy announces a tax increase of \$110 this year, combined with a tax cut of \$100 next year, when the interest rate is 10%. Use a plausible diagram to discuss what the effects of this change are on the world real interest rate, national saving, investment, and the current account balance in equilibrium when

(a) Ricardian equivalence holds.

(b) Ricardian equivalence does not hold.

3. (24 points) Both population and the work force grow at the rate of  $n = 2\%$  per year in a closed economy. Consumption is  $C = 0.5(1-t)Y$ , where  $t$  is the tax rate on income and  $Y$  is total output. The per-worker production function is  $y = 4\sqrt{k}$ , where  $y$  is output per worker and  $k$  is the capital-labor ratio. The depreciation rate of capital is  $d = 8\%$  per year. Suppose that the government purchases goods each year and pays for these purchases using taxes on income. The government runs a balanced budget in each period and the tax rate on income is  $t = 0.5$ .

(a) According to the Solow model, what are the steady-state values of the capital-labor ratio, output per worker, consumption per worker, investment per worker, and government purchases per worker?

(b) Suppose for now that the government permanently decreases its purchases per worker to be zero. Use a plausible diagram to show how this changes from initial level of government purchases per worker.

(c) Continuously given the situation in part (b), what is the Golden Rule capital-labor ratio?

4. (15 points) Describe the strategy of inflation targeting. Why have many countries begun to use this strategy instead of targeting money growth? What are the advantages and disadvantages of inflation targeting?

5. (15 points) Oil prices have risen temporarily, due to political uncertainty in the Middle East. An advisor to the Central Bank suggests, "Higher oil prices reduce aggregate demand. To offset this we must increase the money supply. Then the price level will not need to adjust to restore equilibrium, and we will prevent a recession." Analyze this statement using the IS-LM model.

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6. (5 points) Under a system of fixed exchange rates, what happens if a country's currency is undervalued?

- (a) The central bank loses official reserve assets.
- (b) The central bank gains official reserve assets.
- (c) The currency depreciates.
- (d) The exchange rate falls.

7. (5 points) Suppose Japan is currently running a current account surplus. The most effective way of eliminating this current account surplus would be to temporarily-----government purchases and -----the domestic money supply.

- (a) increase; increase.
- (b) increase; decrease.
- (c) decrease; increase.
- (d) decrease; decrease.

8. (5 points) In the AD-AS model, if producers believe that the increase in their relative prices is small relative to the increase in the general price level, then the slope of the short-run aggregate supply curve will be

- (a) zero.
- (b) small.
- (c) large.
- (d) negative.

9. (5 points) Assume that the real interest rate is 4%, the expected rate of inflation is 8%, and the nominal interest rate is 12%. The monetary base equals \$50 billion. The real seignorage revenue collected by the government would equal

- (a) \$4 billion.
- (b) \$6 billion.
- (c) \$8 billion.
- (d) \$12 billion.