

國立中山大學100學年度碩士班招生考試試題

科目：總體經濟學【經濟所碩士班】

I. Multiple Choices (45%, 3 points each, 單選題)

1. Real money demand in the economy is given by $L=0.3Y-600i$, where Y is real income and i is the nominal interest rate. In equilibrium, real money demand L equals real money supply M/P . Suppose that Y equals 2000 and the real interest rate is 5%.

At what rate of inflation is seignorage maximized?

- a. 42.5% b. 45.0% c. 47.5% d. 50.0%

2. According to the Ricardian equivalence proposition, current deficits

- a. will not affect consumption or national saving
- b. will affect consumption but not national saving
- c. will affect national saving but not consumption
- d. will affect both consumption and national saving

3. Vault cash is equal to \$8 million, deposits by depository institutions at the central bank are \$2 million, the monetary base is \$40 million, and bank deposits are \$100 million. The money multiplier is equal to

- a. 2.5 b. 3.0 c. 4.0 d. 5.0

4. Suppose there was a banking crisis. The money supply would shrink by the greatest amount if the public ____ their currency-deposit ratio and the banks ____ their reserve-deposit ratio.

- a. decreased, decreased b. decreased, increased c. increased, decreased
- d. increased, increased

5. A rise in the domestic real interest rate would cause a ____ in net exports and a ____ in the exchange rate.

- a. rise, rise b. rise, fall c. fall, rise d. fall, fall

6. A rapid and decisive reduction in the rate of growth of the money supply for the purpose of disinflation is called

- a. a salt water policy b. a cold shower policy c. gradualism
- d. a cold turkey policy

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7. One cost of a perfectly anticipated inflation is that it
- transfers wealth from lenders to borrowers
 - transfers wealth from borrowers to lenders
 - increases money costs
 - damaged the role of prices as signals in the economy
8. Lucas critique is an objection to the assumption that
- inflation is always and everywhere a monetary phenomenon
 - there is a negative relationship between inflation and unemployment
 - historical relationships between macroeconomic variables will continue to hold after new policies are in place
 - people form expectations rationally
9. In the Keynesian model, the difference between using monetary and fiscal policy to eliminate a recession is that
- monetary policy will eliminate a recession quicker than fiscal policy will
 - fiscal policy will eliminate a recession quicker than monetary policy will
 - an expansionary monetary policy will leave the economy with a lower real interest rate than an expansionary fiscal policy
 - an expansionary fiscal policy will leave the economy with a lower real interest rate than an expansionary monetary policy
10. In the long run in the Keynesian model, a beneficial supply shock would leave the economy with a higher level of output, but also a _____ real interest rate and a _____ price level.
- higher, lower
 - lower, higher
 - lower, lower
 - higher, higher
11. According to the misperceptions theory, an anticipated 10% decrease in the money supply leads to a short-run reduction in the price level of
- 0%
 - 5%
 - some amount between 0% and 10%
 - 10%
12. One important reason why the Solow residual may be strongly procyclical even if the actual technology used in production doesn't change is that
- employment is procyclical
 - resource utilization is procyclical
 - demand shocks are the dominant force determining the business cycle
 - the coefficients on capital and labor in the production function are procyclical.

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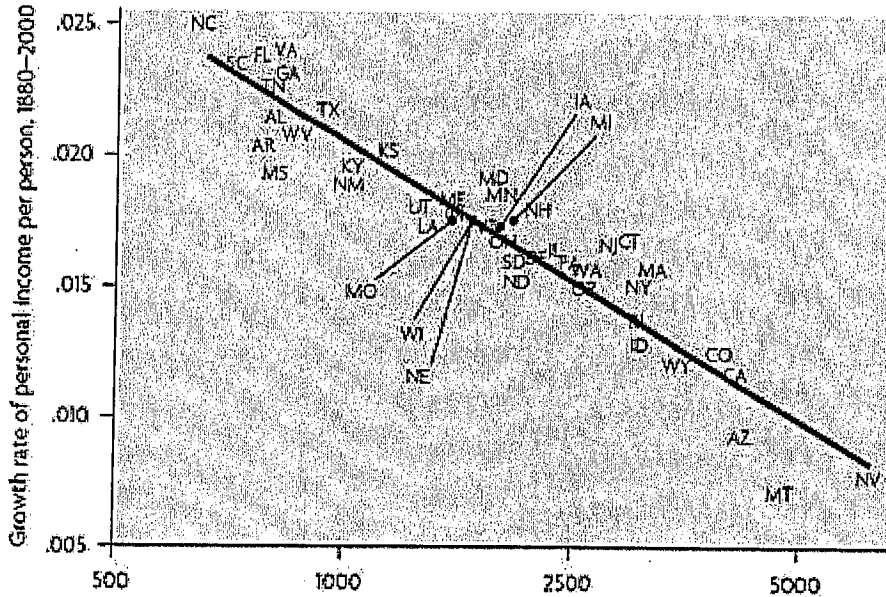
13. When RBC economists compare the correlations in their models to the data, what are they looking at?
- the degree to which variables lead output over the business cycle
 - the strength of procyclicality of different variables
 - the amount of random variation in economic variables
 - the degree to which different economic variables move together
14. Which of the following changes shifts the AD curve to the right?
- A rise in the nominal money supply
 - an increase in income taxes
 - an increase in the risk on nonmonetary assets
 - a decrease in the future marginal productivity of capital
15. When the money supply declines by 10%, in the long run, output ____ and the price level ____.
- is unchanged, is unchanged
 - declines, falls
 - is unchanged, falls
 - declines, is unchanged

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II. Problems and Calculations (55%)

1. (30%) Please apply Solow growth model to answer following questions. One of the important implications of Solow model is convergence of income across states of the US and industrial countries.



- A. (10%) According to the graph above, please interpret whether the convergence has or has not occurred between 1880 and 2000. The x-axis is income level in 1880.
- B. (10%) If Prof. White would like to test the validity of convergence, his equation is as follows.

$$\ln\left[\frac{Y}{N}_{i,2000}\right] - \ln\left[\frac{Y}{N}_{i,1880}\right] = \beta_0 + \beta_1 \ln\left[\frac{Y}{N}_{i,1880}\right] + \varepsilon_i,$$

After collecting data, the estimated equation is as follows.

$$\ln\left[\frac{Y}{N}_{i,2000}\right] - \ln\left[\frac{Y}{N}_{i,1880}\right] = 0.49 - 2.59 \ln\left[\frac{Y}{N}_{i,1880}\right] + \varepsilon_i,$$

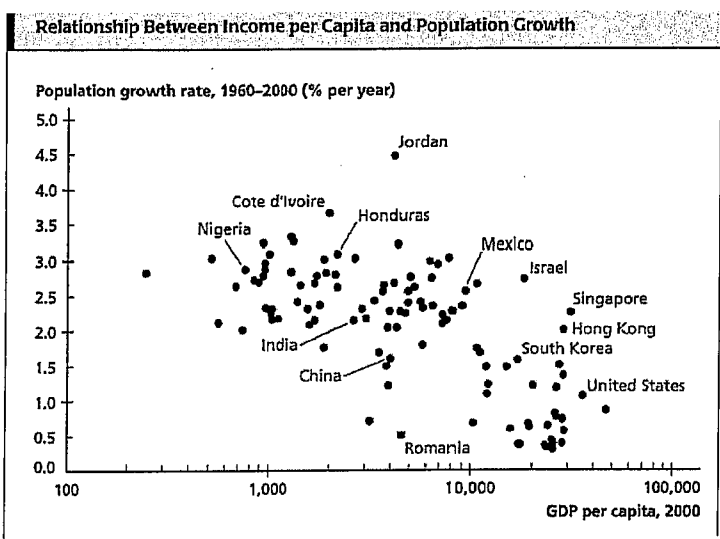
(0.15) (0.65)

How do you form your testing hypothesis? Please also test your hypothesis based on 5% level of significance. Do you support that Prof. White's empirical results in finding "convergence" of Solow model?

- C. (10%) According to the following graph, it shows the relationship between growth rate of population and GDP per capita across countries.

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Please use key equation of Solow model, $\dot{k}(t) = sf(k(t)) - (n + g + \delta)k(t)$ to explain whether the implication from the graph above can be explained by the key equation.

2. (25%) The relationship between exchange rate and current account is an interesting issue to macroeconomists. Please apply the following graph to answer questions.

- A. (10%) Do you find J-curve effects on the graph? Why causes J-curve effect?
- B. (15%) There are both fixed exchange regime and floating exchange regime on the graph. Please graphically apply Mundell-Fleming model to analyze effectiveness of monetary policy after 1975. (Please also show the equations of Mundell-Fleming model with assumptions)

Current Account and Exchange Rate for Japan by year

