國立成功大學

110學年度碩士班招生考試試題

編　號：348

系　所：經濟學系

科　目：總體經濟學

日　期：0202

節　次：第 3 節

備　註：不可使用計算機

※ 考生請注意：本試題不可使用計算機。　請於答案卷(卡)作答，於本試題紙上作答者，不予計分。

Problem 1 單選題, 共10題, 每題5分。

1. Convergence means that

   (A) if poor countries grow fast, then fast growing countries are poor.

   (B) all countries tend towards the same per capita income.

   (C) all countries grow at the same rate.

   (D) the savings rate is positively related to per capita income.

2. Purchasing power parity does not hold in the short to medium run because

   (A) exports don't equal imports.

   (B) exchange rates fluctuate too much.

   (C) some goods aren't internationally traded.

   (D) most business cycles are caused by shocks to aggregate demand.

3. Labor hoarding occurs when

   (A) firms keep good workers so other firms can't hire them.

   (B) the unemployment rate exceeds the natural rate of unemployment.

   (C) involuntary unemployment exceeds voluntary unemployment.

   (D) because of hiring and firing costs, firms retain workers in a recession that they would otherwise lay off.

4. The opportunity cost of money is

   (A) the real interest rate.

   (B) the nominal interest rate.

   (C) zero.

   (D) the inflation rate.

5. The Friedman Rule is optimal because

   A) households are indifferent between holding bonds and money.

   B) households would be able to buy more as prices decrease.

   C) the central bank has better control of the money supply.

   D) money is neutral.

6. Consider the following production function

$$Y = f(K, L, H) = K + LH$$

where Y, K, L, H are output, capital, labor, and human capital, respectively. This production technology displays

(A) decreasing returns to scale in (K, L, H)

(B) constant returns to scale in (K, L, H)

(C) increasing returns to scale in (K, L, H)

(D) we cannot tell.

7. Uncovered interest rate parity implies that

(A) the faster a country's exchange rate is expected to depreciate, the higher is its nominal interest rate

(B) countries with higher inflation rates have lower real interest rates than countries with lower inflation rates

(C) nominal interest rates in different countries must be equal

(D) None of the above

8. Which of the following decreases the real demand for money?

(A) A decrease in the aggregated price level.

(B) An increase in the time interval between successive trips to the bank

(C) An increase in the number of shopping trips per period.

(D) A decrease in the nominal financial transaction fee.

9. Which of the follows is NOT the stylized property of economic fluctuations?

(A) The volatility of consumption is larger than that of output.

(B) Co-movement of many aggregate macroeconomic variables

(C) Limited predictability of fluctuations

(D) Persistence in the rate of economic growth

10. The central bank in the New Keynesian model pursues a policy of

(A) fixed money supply.

(B) inflation between 2 and 3

(C) zero inflation.

(D) targeting the market interest rate.

Problem 2 (20%)

Consider a two-period model where the life-time utility function of a consumer is given by

$$u(c_1, c_2) = \log(c_1) + \beta \log(c_2)$$

where $\beta \in (0,1)$, c_1 represents consumption in period 1 and c_2 represents consumption in period 2. Let this consumer's income in the first period be y_1 and her income in the second period be y_2. The consumer can borrow or lend at the interest rate r via bond markets. Assume that the initial stock of bonds is zero.

 a. (5 points) Find the Euler equation.

 b. (5 points) Derive the optimal choices for consumption in period 1.

 c. (5 points) Derive the optimal choices for consumption in period 2.

 d. (5 points) Now imagine that there are many identical households in the economy with this very same utility function and the same income levels y_1 and y_2. Derive the equilibrium market clearing interest rate in this economy.

Problem 3 (20%)

Consider a household with preferences defined over consumption at time $t = 1, 2$.

$$u(c_1, c_2) = \log(c_1) + \beta \log \left[\frac{c_2}{(c_1)^\alpha} \right]$$

where $\beta \in (0, 1)$, and $\alpha \in [0, 1]$. The household receives income y_1 and y_2 in the two periods, and can save/borrow at rate r across the two periods.

a. (5 points) Explain why α measures the strength of habits in consumption for this household.

b. (5 points) Derive the consumption Euler equation.

c. (5 points) Write the Euler equation as the ratio c_2/c_1 equal to a function of all model's parameters, and explain how α affects the optimal consumption path across the two periods.

d. (5 points) Reinterpret the above result from the perspective of discounting rate.

Problem 4 (10%)

Suppose that the job finding rate is 6% and the job separation rate is 4%. Also assume that total population remains constant at 100. Find the number unemployed in the steady state.