

**Final Exam (Open-Book)**  
**Intermediate Macroeconomics**  
**Instructed by: Ming Yi**  
**Undergraduate Economics Program, HUST**  
**Wednesday, January/11/2017**

**Name:** \_\_\_\_\_ **Class:** \_\_\_\_\_ **Student ID:** \_\_\_\_\_

1. ( $5' \times 3 + 6' = 21$  points) In year 2015, the Yujia Village, an economy that produces and consumes only apples and oranges, produced 100 apples and 200 oranges, with prices ¥1/apple and ¥2/orange. In 2016, it produced 200 apples and 300 oranges. Take 2015 as the base year, it is known that the nominal GDP of Yujia Village in 2016 is twice as much as its nominal GDP in 2015. What is more, a typical household in the village always consumes 1 apple with 2 oranges together. And the Consumer Price Index of the village in 2016 is 120.

(a) What is the growth rate of real GDP of Yujia Village from 2015 to 2016?

(b) What is the GDP deflator of Yujia Village in 2016?

(c) What are the prices of apples and oranges in 2016?

(d) A Yujia Villager, Bob, says that he really wants become an apple producer, but it is tedious (乏味的) to enter the job market and participate the job

interviews. As a result, he has been staying home without doing anything productive for two years. Is Bob employed, frictionally unemployed, or structurally unemployed?

2. ( $5' \times 4 = 20$  points) Consider an economy that uses exclusively labor and capital to produce. Suddenly, the government of the economy plans to permanently increase the level of government purchases.

(a) Suppose the economy is a closed one. How does the long-run GDP of the economy change because of the increased government purchases?

(b) Will your answer to (a) be changed if the economy is an open one? Explain your answers briefly.

(c) Suppose the economy is a closed one. Will the increased government purchases change the equilibrium interest rate?

(d) Will your answer to (c) be changed if the economy is an open one? Explain your answers briefly.

3. ( $2' \times 7 = 14$  points) Answer the following questions.

(a) Can you think of an *imaginary economy*, in which cosmetics (化粧品) serve as money? If no, explain why. If yes, depicts the economy briefly.

(b) What is the main reason that the central banks should regulate commercial banks in all modern economies?

(c) If an economy adopts a 100-percent-reserve banking system, can commer-

cial banks still create money?

(d) Suppose a central bank plans to reduce the money supplied. It is said that it has three options to implement this goal. What are they?

(e) There is a terminology (专业术语) used in your textbook to express the idea of *inflation tax*. What is it?

(f) What is the relationship between inflation and interest rates, as implied by the Fisher Effect?

(g) According to the Quantity Theory of Money, how does inflation affect the real interest rate in the long run?

4. ( $5' \times 4 = 20$  points) Consider an competitive economy with interest rate  $r = 0.05$ , capital depreciation rate  $\delta = 0.03$ , technology growth rate  $g = 0.03$ , and population growth rate  $n = 0.02$ .

(a) Why should we be interested in the Golden Rule steady state of an economy?

- (b) Is the economy depicted above running on its Golden Rule steady state? If yes, explain how you get your answer. If no, what should the government do to achieve the Golden rule steady state?
- (c) It is said that the Golden Rule steady state gives the greatest growth rate of consumption per capita. True or False? Explain your answer.
- (d) It is said that population is usually a burden to economic growth. So if we can reduce the population growth rate from  $n = 0.02$  to  $n = 0.01$ , everyone will be better off, in the sense of enjoying greater growth rate of consumption in the new Golden Rule steady state. True or False? Explain your answer.

5. (10' + 10' + 5' = 25 points) Answer the following questions.

(a) Consider a closed economy in the short run. Suppose there is a significant reduce in the level of money supply. Is it possible for the government to **perfectly counteract** the effects of this change on **all** variables, using only *fiscal* policies? If yes, explain what the government should do. If no, explain your economic intuitions.

(b) Consider an open economy in the short run. According to the Mundell-Fleming Model, could a trade policy along affect the output under a flexible exchange rate system? Explain your answers.

- (c) According to the supply school's viewpoints, why unexpected inflations can increase outputs? Explain the economics intuitions **within 60 words and in your own words.**