

國立清華大學 103 學年度碩士班考試入學試題

系所班組別：科技管理研究所

考試科目（代碼）：經濟學(4401)

共 3 頁，第 1 頁 *請在【答案卷】作答

一、單選題 (30%，每題五分，請將選擇題答案寫在答案卷第一頁最上方)

1. Due to the recent recession, investors become more pessimistic about the future demand. What do the classical theory and the Keynesian-cross say about national saving regarding this decrease in investor's confidence?

- (A). the classical: an increase; the Keynesian: an increase
- (B). the classical: an increase; the Keynesian: a decrease
- (C). the classical: a decrease; the Keynesian: an increase
- (D). the classical: a decrease; the Keynesian: a decrease

2. If the Phillips curve is $u = u^N - \alpha(\pi - \pi^e)$, where u^N represents natural unemployment rate, while π^e represents expected inflation rate. The DPP (民進黨) is more concerned about unemployment; the KMT (國民黨) is more concerned about inflation, while the NPSU (無黨團結聯盟) is concerned about both. If, before the election, voters generally expect that the DPP will win the election, which of the followings is more likely to be correct after the election according the Phillips curve?

- (A). The unemployment rate will be close to the natural unemployment rate if the DPP wins the election.
- (B). The unemployment rate will be close to the natural unemployment rate if the NPSU wins the election.
- (C). The unemployment rate will be lower than the natural unemployment rate if the KMT wins the election.
- (D). The unemployment rate will be close to the natural unemployment rate no matter which party wins the election.

3. Why are the predicted effects on output of an increase in government expenditure different between the Keynesian cross and the IS-LM model ?

- (A). These two models are totally unrelated.
- (B). In the IS-LM model, the interest rates will increase and thus reduce the expansionary effect of fiscal policy.
- (C). In the IS-LM model, the interest rate will decline and thus strengthen the expansionary effect of fiscal policy.
- (D). In the IS-LM model, the money demand will increase owing to interest rises.

國立清華大學 103 學年度碩士班考試入學試題

系所班組別：科技管理研究所

考試科目（代碼）：經濟學(4401)

共 3 頁，第 2 頁 *請在【答案卷】作答

4. Which of the following would cause the velocity of money to increase?
- (A). Interest returns on non-monetary assets such as stocks decline.
 - (B). The banks used to pay no interest for checking accounts but now pay interest for checking accounts.
 - (C). The adoption of ATM makes the payments of transactions easier.
 - (D). The central bank reduces the discount rate to avoid a prospective recession.
5. In a closed economy, the equilibrium interest rate is determined by the saving and the investment. If an increase in the interest rate is observed, which of the following is most likely the reason?
- (A). An increase in the national output.
 - (B). A cut on corporate income tax.
 - (C). A declining marginal product of capital due to government inefficiency.
 - (D). The government reduces its expenditure.
6. If we define three types of market for fruits and its products, which are ‘apples’, ‘all fruit’ and ‘all fruit and fruit juice’, respectively, please rank the price elasticities of demand (in absolute value) for these three markets.
- (A). The demand elasticity for all fruit and fruit juice is largest.
 - (B). The demand elasticity for all fruit is largest.
 - (C). The demand elasticity for apples is largest.
 - (D). None of the above.

二、簡答題 (30%, 每題十分，請勿長篇大論)

1. Why monopolistically competitive markets cannot achieve productive efficiency and allocative efficiency?
2. After attending a course for four weeks, Alice realizes that she does not enjoy it. However, she is reluctant to quit because she has already attended over ten hours of lectures and submitted two assignments. If she quits, she thinks she will be wasting the time that she has invested in the course. Is her decision to keep the course rational?
3. Based on the definitions of labor force participation in Taiwan, how will the current trend of declining fertility rate (少子化) affect the labor force participation rate and the unemployment rate in 2040?

國立清華大學 103 學年度碩士班考試入學試題

系所班組別：科技管理研究所

考試科目（代碼）：經濟學(4401)

共 3 頁，第 3 頁 *請在【答案卷】作答

三、計算題(40%)

1. [10%] Suppose that Jill and Joe are the only two people in the small town of Andover. Andover has land available to build a park of no more than 9 acres. Jill's demand for the park is: $P=10-Q$ while Joe's demand is: $P=20-2Q$, where P is the price of per acre land and Q is the acres of land. If the supply curve of the park is : $P=12$, please find the optimal acres of the park for Andover.

2. Suppose Jane can produce 10 candy bars or 10 cords of firewood in a day; Denise can produce 4 candy bars or 6 cords of firewood in a day, while Harvey can produce 6 candy bars or 4 cords of firewood in a day.

a. [5%] Draw the production possibility frontier for a society with these three people with the amount of candy bars in the horizontal axis while the amount of firewood in the vertical axis.

b. [5%] If the relative price of candy to firewood in the competitive market is 0.8, what amounts of candy and firewood Jane, Denise and Harvey would produce, respectively?

3. The demand for rice each year is: $P = 200 - Q$ and the supply of rice each year is: $P = 50 + 0.5Q$, where Q is the amount of kilograms.

An agricultural price floor is a price that the government guarantees farmers will receive for a particular crop. Suppose the federal government sets a price floor for rice at \$120 per kilogram.

a. If the government agrees to purchase any surplus output at \$120, what are the consumer surplus and the deadweight loss under this scheme?[5%, 5%]

b. Suppose the government buys up all of the farmers' output at the floor price \$120 and then sells the output to consumers at whatever price it can get. How much will it cost the government? [5%] What is the deadweight loss under this scheme?[5%]