

國立交通大學 107 學年度碩士班考試入學試題

科目：經濟學(5142)

考試日期：107 年 2 月 1 日 第 3 節

系所班別：科技管理研究所

組別：科管所乙組

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【可使用計算機】*作答前請先核對試題、答案卷(試卷)與准考證之所組別與考科是否相符!!

壹、申論計算題 (請列出計算式與說明, 共 40 分; 中文、英文作答皆可, 但不得混用)

1. Schrecklich and Lamerde are two obscure modernist painters, who are no longer alive but whose paintings are still enjoyed by persons of dubious taste. The demand function for Schrecklichs is $200 = 4P_S + 2P_L$ and the demand function for Lamerdes is $200 = 3P_L + P_S$, where P_S and P_L are respectively the price of Schrecklichs and Lamerdes. If the world supply of Schrecklichs is 100 and the world supply of Lamerdes is 70, then what is the equilibrium price of Schrecklichs? (5%)
2. The demand for gasoline is described by $Q = 980 - 300p$, where Q are gallons of gasoline sold and p is the price in dollars. The supply is $Q = 22,980 + 3,000p$. Suppose the state government places a tax of 18 cents on every gallon of gasoline sold. What is the deadweight loss resulting from this tax? (10%)
3. Diego has \$6,400. He plans to bet on a soccer game. Team A is a favorite to win. Assume no ties can occur. For \$0.8 one can buy a ticket that will pay \$1 if team A wins and nothing if B wins. For \$0.2 one can buy a ticket that pays \$1 if team B wins and nothing if A wins. Diego thinks the two teams are equally likely to win. He buys tickets so as to maximize the expected value of $\ln W$ (the natural log of his wealth). After he buys his tickets, team A loses a star player and the ticket price moves to \$0.5 for either team. Diego buys some new tickets and sells some of his old ones. The game is then played and team A wins. How much wealth does he end up with? (10%)
4. Daisy received a tape recorder as a birthday gift and is not able to return it. Her utility function is $U(x, y, z) = x + z^{1/2} f(y)$, where z is the number of tapes she buys, y is the number of tape recorders she has, and x is the amount of money she has left to spend. $f(y) = 0$ if $y < 1$ and $f(y) = 24$ if y is 1 or greater. The price of tapes is \$4 and she can easily afford to buy dozens of tapes. How many tapes will she buy? (5%)
5. Suppose that Agatha has \$825 to spend on tickets for her trip. She intends to spend the entire amount \$825 on tickets and prefers traveling first class to traveling second class. She needs to travel a total of 1,500 miles. Suppose that the price of first-class tickets is \$0.6 per mile and the price of second-class tickets is \$0.3 per mile. How many miles will she travel by second class? (5%)
6. Decide whether the following statements is true or false. Unexpected inflation hurts borrowers and helps lenders. Please answer with brief explanation. (5%)

貳、單一選擇題 (請使用答案卡作答; 共 60 分, 每題 3 分, 答錯不倒扣)

1. The economy goes into recession. Which of the following lists contains things policymakers could do to try to end the recession?
 - a. increase the money supply, increase taxes, increase government spending
 - b. increase the money supply, increase taxes, decrease government spending
 - c. increase the money supply, decrease taxes, increase government spending
 - d. decrease the money supply, increase taxes, decrease government spending
2. People choose to hold a smaller quantity of money if
 - a. the interest rate rises, which causes the opportunity cost of holding money to rise.
 - b. the interest rate falls, which causes the opportunity cost of holding money to rise.
 - c. the interest rate rises, which causes the opportunity cost of holding money to fall.
 - d. the interest rate falls, which causes the opportunity cost of holding money to fall.
3. Which of the following is correct?
 - a. Real GDP is the variable most commonly used to measure short-run economic fluctuations. These fluctuations can be predicted with some accuracy.
 - b. Real GDP is the variable most commonly used to measure short-run economic fluctuations. It is

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- almost impossible to predict these fluctuations with much accuracy.
- c. Nominal GDP is the variable most commonly used to measure short-run economic fluctuations. These fluctuations can be predicted with some accuracy.
- d. Nominal GDP is the variable most commonly used to measure short-run economic fluctuations. It is almost impossible to predict these fluctuations with much accuracy.
4. Liquidity refers to
- the ease with which an asset is converted to the medium of exchange.
 - the measurement of the intrinsic value of commodity money.
 - the measurement of the durability of a good.
 - how many times a dollar circulates in a given year.
5. Suppose you win a small lottery and you are given the following choice: You can receive (1) an immediate payment of \$5,000 or (2) two annual payments, each in the amount of \$2,700, with the first payment coming one year from now, and the second payment coming two years from now. You would choose to take the two annual payments if the interest rate is
- 2 percent, but not if the interest rate is 3 percent.
 - 3 percent, but not if the interest rate is 4 percent.
 - 4 percent, but not if the interest rate is 5 percent.
 - 5 percent, but not if the interest rate is 6 percent.
6. The primary economic function of the financial system is to
- keep interest rates low.
 - provide expert advice to savers and investors.
 - match one person's consumption expenditures with another person's capital expenditures.
 - match one person's saving with another person's investment.
7. If companies from foreign countries build and operate factories in China, then China's productivity
- and the wages of Chinese workers increase.
 - increases but the wages of Chinese workers decrease.
 - decreases but the wages of Chinese workers increase.
 - and the wages of Chinese workers decrease.
8. Which of the following is correct?
- The GDP deflator is better than the CPI at reflecting the goods and services bought by consumers.
 - The CPI is better than the GDP deflator at reflecting the goods and services bought by consumers.
 - The GDP deflator and the CPI are equally good at reflecting the goods and services bought by consumers.
 - The GDP deflator is more commonly used as a gauge of inflation than the CPI is.
9. Which of the following is *not* a question that macroeconomists address?
- Why is average income high in some countries while it is low in others?
 - Why does the price of oil rise when war erupts in the Middle East?
 - Why do production and employment expand in some years and contract in others?
 - Why do prices rise rapidly in some periods of time while they are more stable in other periods?
10. Information asymmetry refers to
- the tendency of a person who is imperfectly monitored to engage in dishonest or otherwise undesirable behavior.
 - the tendency for the mix of unobserved attributes to become undesirable from the standpoint of an uninformed party.
 - an action taken by an informed party to reveal private information to an uninformed party.
 - a difference in access to relevant knowledge.
11. Which of the following statements is correct?
- The theory of consumer choice provides a more complete understanding of supply, just as the theory of

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- the competitive firm provides a more complete understanding of demand.
- b. The theory of consumer choice provides a more complete understanding of demand, just as the theory of the competitive firm provides a more complete understanding of supply.
 - c. Monetary theory provides a more complete understanding of demand, just as the theory of the competitive firm provides a more complete understanding of supply.
 - d. The theory of public choice provides a more complete understanding of supply, just as the theory of the competitive firm provides a more complete understanding of demand.
12. Which of the following is most likely to occur when the government enacts policies to make the distribution of income more equal?
- a. a more efficient allocation of resources
 - b. a distortion of incentives
 - c. unchanged behavior
 - d. All of the above are correct.
13. A compensating differential is
- a. a difference in pay due to nonmonetary characteristics of jobs.
 - b. an high wage paid by employers to entice workers to be more productive.
 - c. the difference between the quantity of labor supplied and the quantity of labor demanded at the minimum wage.
 - d. equivalent to a union wage.
14. The marginal product of labor is
- a. the increase in the amount of output from an additional unit of labor.
 - b. the total amount of output divided by the total units of labor.
 - c. total revenue minus total cost.
 - d. also called the marginal profit.
15. In studying oligopolistic markets, economists assume that
- a. there is no conflict or tension between cooperation and self-interest.
 - b. it is easy for a group of firms to cooperate and thereby establish and maintain a monopoly outcome.
 - c. each oligopolist cares only about its own profit.
 - d. strategic decisions do not play a role in such markets.
16. Which of the following statements is *not* correct?
- a. Monopolistic competition is similar to monopoly because in each market structure the firm can charge a price above marginal costs.
 - b. Monopolistic competition is similar to perfect competition because both market structures are characterized by free entry.
 - c. Monopolistic competition is similar to oligopoly because both market structures are characterized by barriers to entry.
 - d. Monopolistic competition is similar to perfect competition because both market structures are characterized by many sellers.
17. Because the goods offered for sale in a competitive market are largely the same,
- a. there will be few sellers in the market.
 - b. there will be few buyers in the market.
 - c. only a few buyers will have market power.
 - d. sellers will have little reason to charge less than the going market price.
18. Excludability is the property of a good whereby
- a. one person's use diminishes other peoples' use.
 - b. a person can be prevented from using it.
 - c. a good is private, not public.
 - d. a good is public, not private.

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19. The principle of comparative advantage asserts that
- not all countries can benefit from trade with other countries.
 - the world price of a good will prevail in all countries, regardless of whether those countries allow international trade in that good.
 - countries can become better off by exporting goods, but they cannot become better off by importing goods.
 - countries can become better off by specializing in what they do best.
20. A result of welfare economics is that the equilibrium price of a product is considered to be the best price because it
- maximizes both the total revenue for firms and the quantity supplied of the product.
 - maximizes the combined welfare of buyers and sellers.
 - minimizes costs and maximizes output.
 - minimizes the level of welfare payments.