

考試科目	經濟學	系所別	經濟學系、企管學系、 財管學系 二年級	考試時間	7月10日(三) 第二節
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### 1 Multiple Choice (3 points each)

Identify the letter of the choice that best completes the statement or answers the question.

- A competitive market is in long-run equilibrium. If demand decreases, we can be certain that price will

  - fall in the short run. All firms will shut down, and some of them will exit the industry. Price will then rise to reach the new long-run equilibrium.
  - fall in the short run. No firms will shut down, but some of them will exit the industry. Price will then rise to reach the new long-run equilibrium.
  - fall in the short run. All, some, or no firms will shut down, and some of them will exit the industry. Price will then rise to reach the new long-run equilibrium.
  - not fall in the short run because firms will exit to maintain the price.
- A reduction in a monopolist's fixed costs would

  - decrease the profit-maximizing price and increase the profit-maximizing quantity produced.
  - increase the profit-maximizing price and decrease the profit-maximizing quantity produced.
  - not change the profit-maximizing price or quantity.
  - possibly increase, decrease or not change profit-maximizing price and quantity, depending on the elasticity of demand.
- An industry is a natural monopoly when

  - the government assists the firm in maintaining the monopoly.
  - a single firm owns a key natural resource.
  - a single firm can supply a good or service to an entire market at a smaller cost than could two or more firms.
  - (ii) only
  - (iii) only
  - (i) and (ii)
  - (ii) and (iii)
- Mike and Sandy both work eight hours a day. In one day, Mike can make 5 cakes or 10 ice cream, whereas Sandy can make 2 cakes or 6 ice cream. Given this, which statement(s) is (are) correct?

  - Sandy has a lower opportunity cost in producing ice cream than Mike.
  - Mike has an absolute advantage in producing both goods.
  - It is not beneficial for Mike to trade with Sandy.
  - (i) and (ii)
  - (i) and (iii)
  - (ii) and (iii)
  - (i), (ii), and (iii)

備註

- 作答於試題上者，不予計分。
- 試題請隨卷繳交。

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5. Dave faces tradeoffs between consuming in the current period when he is young and consuming in a future period when he is old. If he experiences an increase in the current interest rate he earns on his savings, then he will save
- less in the current period if the substitution effect is greater than the income effect.
  - less in the current period if the income effect is greater than the substitution effect.
  - more in the current period if the income effect is greater than the substitution effect.
  - more in the current period, regardless of the sizes of the income and substitution effects.
6. A steel company sells some steel to a bicycle company for \$100. The bicycle Company uses the steel to produce a bicycle, which it sells for \$250. Taken together, these two transactions contribute
- \$100 to GDP.
  - \$250 to GDP.
  - between \$250 and \$350 to GDP, depending on the profit earned by the bicycle company when it sold the bicycle.
  - \$350 to GDP
7. The CPI differs from the GDP deflator in that
- the CPI is a price index, while the GDP deflator is a productivity index.
  - substitution bias is not a problem with the CPI, but it is a problem with the GDP deflator.
  - increases in the prices of foreign produced goods that are sold to U.S. consumers show up in the CPI but not in the GDP deflator.
  - increases in the prices of domestically produced goods that are sold to the U.S. government show up in the CPI but not in the GDP deflator.
8. Buddy is the owner of a firm that bottles beer in St. Louis, Missouri. There are many other such firms in the area. Buddy decides that if he pays his workers a wage higher than the going market wage, his profits will increase. Which of the following is a likely explanation for his decision?
- The higher the wage, the less often his workers will choose to leave his firm.
  - The higher the wage, the lower will be the costs of obtaining needed supplies.
  - The higher the wage, the more he can charge for his beer.
  - The higher the wage, the more he will have to monitor his workers for shirking.
9. A country has output of \$600 billion, consumption of \$350 billion, government expenditures of \$90 billion and investment of \$60 billion. What is its supply of loanable funds?
- \$160 billion
  - \$150 billion
  - \$60 billion
  - \$30 billion

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10. When a country experiences capital flight its interest rate
- and net capital outflow rise.
  - rises and net capital outflow falls.
  - falls and net capital outflow rises.
  - interest rate and net capital outflow fall.
11. Which of the following contains a list only of things that increase when the budget deficit of the U.S. increases?
- U.S. supply of loanable funds, U.S. interest rates, U.S. domestic investment
  - U.S. imports, U.S. interest rates, the real exchange rate of the dollar
  - U.S. interest rates, the real exchange rate of the dollar, U.S. domestic investment
  - the real exchange rate of the dollar, U.S. net capital outflow, U.S. net exports
12. Suppose the tax rate on interest income is 50 percent, the real interest rate is 3 percent, and the inflation rate is 5 percent. In this case, the real after-tax interest rate is
- 1.5 percent.
  - 1 percent.
  - 1 percent.
  - 2 percent.
13. In a certain economy, when income is \$1000, consumer spending is \$700. The value of the multiplier for this economy is 2.5. It follows that, when income is \$1020, consumer spending is
- \$712. For this economy, an initial increase of \$100 in consumer spending translates into a \$250 increase in aggregate demand.
  - \$712. For this economy, an initial increase of \$100 in consumer spending translates into a \$400 increase in aggregate demand.
  - \$750. For this economy, an initial increase of \$100 in consumer spending translates into a \$250 increase in aggregate demand.
  - \$750. For this economy, an initial increase of \$100 in consumer spending translates into a \$400 increase in aggregate demand.
14. The money supply in Taxland is \$400 billion. Nominal GDP is \$800 billion and real GDP is \$200 billion. What are the price level and velocity in Taxland?
- the price level and velocity are both 4
  - the price level is 4 and velocity is 2
  - the price level and velocity are both 2
  - the price level is 2 and velocity is 4

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15. Initially, the economy is in long-run equilibrium. Aggregate demand then shifts leftward by \$50 billion. The government wants to increase its spending in order to avoid a recession. If the crowding-out effect is always one-third as strong as the multiplier effect, and if the MPC equals 0.6, then by how much do government purchases have to increase in order to offset the \$50 billion leftward shift?

- A. by \$90 billion
- B. by \$60 billion
- C. by \$20 billion
- D. by \$30 billion

16. In December 1999 people feared that there might be computer problems at banks as the century changed. Consequently, people wanted to hold relatively more in currency and relatively less in deposits. In anticipation banks raised their reserve ratios to have enough cash on hand to meet depositors' demands. These actions by the public

- A. would increase the multiplier. If the Fed wanted to offset the effect of this on the size of the money supply, it could have sold bonds.
- B. would increase the multiplier. If the Fed wanted to offset the effect of this on the size of the money supply, it could have bought bonds.
- C. would reduce the multiplier. If the Fed wanted to offset the effect of this on the size of the money supply, it could have sold bonds.
- D. would reduce the multiplier. If the Fed wanted to offset the effect of this on the size of the money supply, it could have bought bonds.

## 2 Problems

1. Suppose that a market is described by the following supply and demand equations:

$$Q^S = P/4,$$

$$Q^D = 500 - P.$$

- a. (4 points) Solve for the equilibrium price and the equilibrium quantity.
- b. (10 points) Now suppose the government levies a tax of \$100 per unit on the buyers. What are the price received by sellers, the price paid by buyers, and the quantity sold? What are the price elasticity of demand and the price elasticity of supply at these after-tax equilibrium prices?
- c. (6 points) How much revenue does the government collect from the tax on this good? How is the burden of the tax divided between buyers and sellers?

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2. (10 points) Suppose the natural rate of unemployment is 4 percent. On one graph, draw the long-run Phillips curve and two short-run Philips curves that describe the four situations listed below. Label the point that shows the position of the economy in each case.

Point A: actual inflation is 6 percent, and expected inflation is 3 percent.

Point B: actual inflation is 4 percent, and expected inflation is 3 percent.

Point C: actual inflation is 5 percent, and expected inflation is 5 percent.

Point D: actual inflation is 6 percent, and expected inflation is 5 percent.

3. There are four polluting firms in an industrial city. Their pollution levels and pollution abatement costs are given in the following table.

Firm	Initial Pollution Level	Cost of Reducing Pollution by 1 Unit
A	60 Units	\$25
B	70 Units	\$20
C	50 Units	\$15
D	40 Units	\$10

The city government wants to reduce pollution to 120 units, so it gives each firm 30 tradable pollution permits.

a. (8 points) Which firms will sell permits and how many do they sell? Which firms will buy permits and how many do they buy? What is the total cost of pollution reduction in this situation?

b. (4 points) How much higher would the costs of pollution reduction be if the permits could not traded?

c. (4 points) What size of a corrective tax would achieve the goal of reducing pollution to 120 units?

d. (3 points) Now suppose the government distribute the tradable permits only to firms A and B (60 permits each). What is the total cost of pollution reduction in this situation?

e. (3 points) If the government distribute the tradable permits only to firms A, B and C (40 permits each). What is the total cost of pollution reduction in this situation?

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