

姓名：\_\_\_\_\_ 學號：\_\_\_\_\_ 科系：\_\_\_\_\_ 年級：\_\_\_\_\_

# 經濟學競試

(雙面列印)

April 2017

**Instructions:** 請在本頁與問答题頁寫上你的姓名、學號、科系、年級。考生請出示學生證以便備查。考試鈴響後 20 分鐘不得進場，考試鈴響後 30 分鐘內不得出場，不准使用計算機或任何形式字典。選擇題(Multiple Choices)回答在選擇題答案卡上，問答题(Short Questions)回答在本考卷上。

## Multiple Choices [75pts, 3pts each]

1. If your demand for gasoline is inelastic, when the price of gasoline falls, which of the following occurs?
- A) Your demand curve for gasoline will shift leftward.
  - B) Your demand curve for gasoline will shift rightward.
  - C) Your total expenditure on gasoline will increase.
  - D) Your total expenditure on gasoline will decrease.

Answer: D

2. If marginal cost is less than average variable cost and output increases, average total cost \_\_\_\_\_ and average variable cost \_\_\_\_\_.
- A) increases; increases
  - B) decreases; decreases
  - C) decreases; increases
  - D) increases; decreases

Answer: B

3. A perfectly competitive market is characterized by
- A) high barriers to entry.
  - B) firms that are price setters.
  - C) firms facing a downward sloping demand curve.
  - D) no restrictions on entry into the market.

Answer: D

4. Suppose initially that the working-age population is 220 million, the labor force is 150 million, and the official U-3 unemployment rate is 10 percent. 5 million new jobs are created and filled by 5 million people who had previously been discouraged workers. What is the new U-3 unemployment rate?

- A) 6.25 percent
- B) 6.7 percent
- C) 9.7 percent
- D) 8.7 percent

Answer: C

5. A decrease in the price of eggs from \$1.50 to \$1.30 per dozen resulted in an increase in egg purchases in two cities. In city A, daily egg purchases increased from 6000 to 8000 dozens; in a smaller city, city B, daily egg purchases increased from 300 to 400 dozens. The price elasticity of demand is therefore
- A) the same in A as in B.
  - B) lower in the smaller city as would be expected.
  - C) certainly affected by population differences in different markets.
  - D) greater in the smaller city as would be expected.

Answer: A

6. For a perfectly competitive firm, in the long-run equilibrium
- A)  $P = MC = ATC = MR$ .
  - B)  $P = MC > ATC$ .
  - C)  $MR = MC = AFC$ .
  - D)  $MR = P = ATC = AFC$ .

		Student 1	
		Work	Don't work
Student 2	Work	2: +10 1: +10	2: +5 1: +5
	Don't work	2: +50 1: +5	2: 0 1: 0

Answer: A

7. Two students are assigned a group project. Each has the option to work or not work to achieve a high grade. The payoffs are shown in the above table. Student 1 should
- A) work only if student 2 works.
  - B) not work regardless of what student 2 decides.
  - C) work regardless of the decision made by student 2.
  - D) not work if student 2 works.

Answer: C

8. The law of diminishing marginal returns says that as the firm uses more of \_\_\_\_\_, with a given quantity of \_\_\_\_\_, the product of the variable input eventually diminishes.
- A) a fixed input; variable inputs; marginal

- B) all inputs; capital; average
- C) a variable input; fixed inputs; average
- D) a variable input; fixed inputs; marginal

Answer: D

9. Which of the following is true for BOTH monopoly and a perfectly competitive firm?
- A) The demand for the individual firm's product is perfectly elastic.
  - B) Economic profits can be sustained indefinitely over time.
  - C) The marginal revenue curve is horizontal at the market equilibrium price.
  - D) Profits are maximized by producing at the level of output where marginal revenue is equal to marginal cost.

Answer: D

10. Of the following, which is correct?
- A) Nominal GDP does not change when the production of goods and services increases.
  - B) Nominal GDP is not affected by changes in prices of goods and services.
  - C) Nominal GDP increases when the prices of goods and services increase.
  - D) Real GDP changes only when the prices of goods and services really change.

Answer: C

11. "German economic growth slowed ... Economic growth slowed to 0.3 percent from 0.5 percent. Expansion was driven by exports... (and) household consumption added ...to growth. As unemployment declines and disposable incomes increase, household spending may also gain momentum.

www.bloomberg.com, August 23, 2007

We can conclude that the German economy

- A) is at the peak of the business cycle.
- B) has entered the expansion phase of the business cycle.
- C) has slowed due to a decline in investment or government spending.
- D) is in the recession phase of the business cycle.

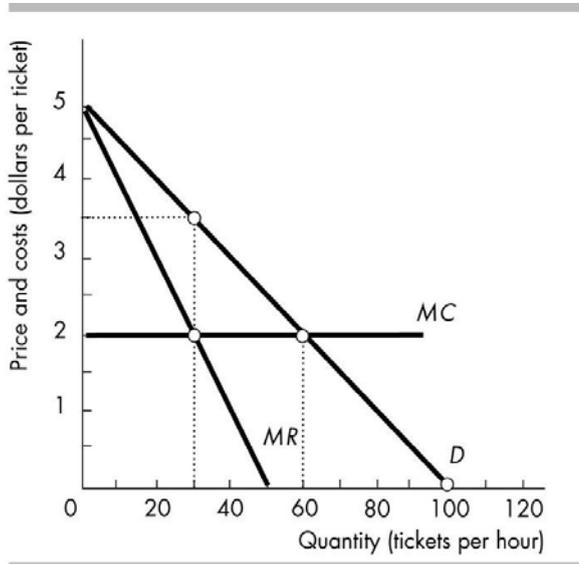
Answer: C

Component	Number of people
Total population	2600
Working-age population	2000
Not in labor force	500
Employed	1300

12. Using the information in the table above, calculate the unemployment rate.
- A) 53.3 percent
  - B) 30.8 percent

- C) 13.3 percent
- D) 7.7 percent

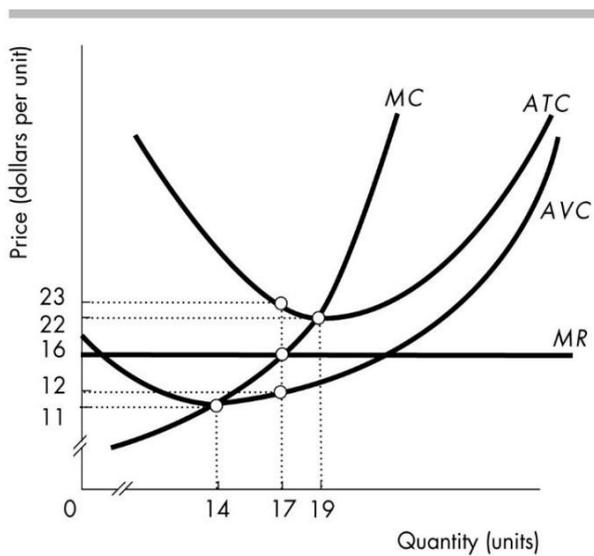
Answer: C



13. If the monopoly illustrated in the figure above could engage in perfect price discrimination, then when it maximizes its profit the total revenue collected by the firm would be

- A) \$110.
- B) \$120.
- C) \$210.
- D) \$310.

Answer: C



14. Consider the perfectly competitive firm in the above figure. At what price will long-run equilibrium occur?

- A) \$11.

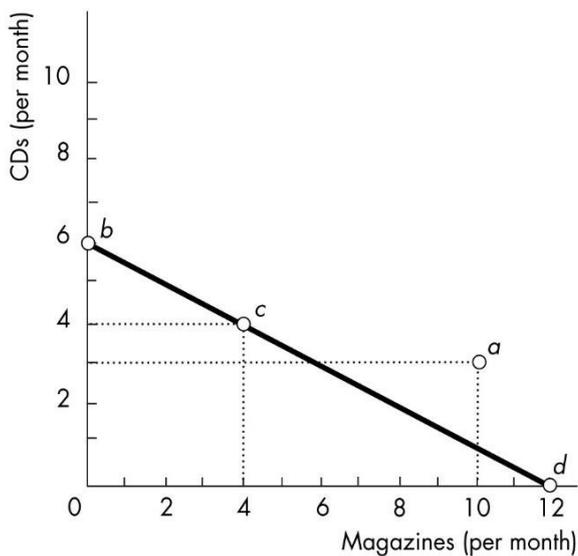
- B) \$12.
- C) \$22.
- D) \$23.

Answer: C

Quantity	Long-run total cost (dollars)
0	0
20	100
40	160
60	180
80	190

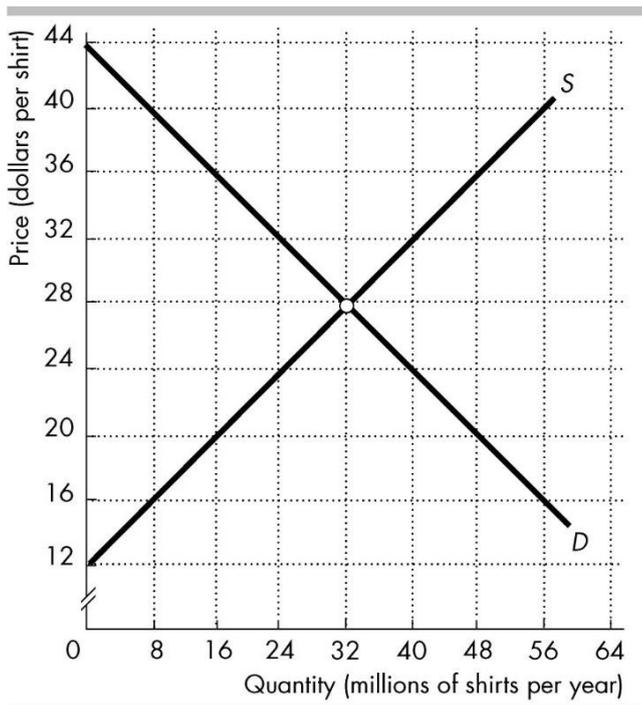
15. The cost data in the above table data show that production is characterized by
- A) economies of scale.
  - B) constant returns to scale.
  - C) decreasing returns to scale.
  - D) More information is needed to answer the question.

Answer: A



16. The above figure gives your budget line between CDs and magazines. Which of the following changes would NOT allow you to buy more CDs?
- A) a decrease in the relative price of CDs
  - B) an increase in income
  - C) a decrease in the price of magazines with no change in the price of CDs
  - D) None of the above answers is correct because all of the above changes allow you to buy more CDs.

Answer: D



17. The figure shows the market for shirts in the United States, where D is the U.S demand curve and S is the U.S. supply curve. The world price is \$20 per shirt. The United States imposes a tariff on imported shirts, \$4 per shirt. In the figure above, with the tariff the United States imports \_\_\_\_\_ million shirts per year.

- A) 24
- B) 8
- C) 32
- D) 16

Answer: D

18. Most college courses have a required textbook. Previously, textbooks were only available through the campus bookstore, but now, these texts can be purchased from online retailers, other bookstores, or students can buy an electronic version of the text. Because of this, we can predict the price elasticity of demand for textbooks from the campus bookstore is \_\_\_\_\_.

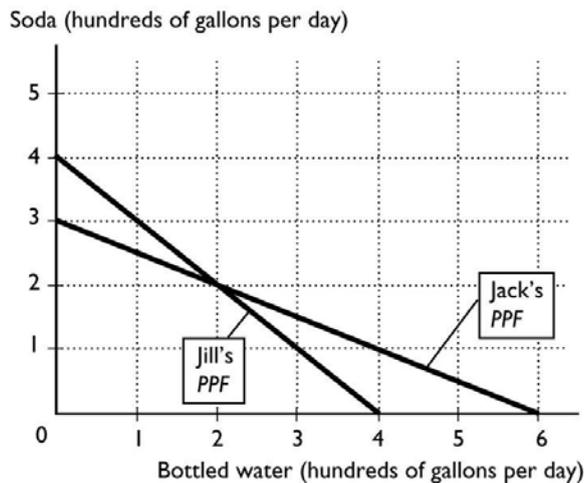
- A) increasing
- B) decreasing
- C) staying the same
- D) increasing and then decreasing

Answer: A

19. If a perfectly competitive firm is maximizing its profit and is making an economic profit, which of the following is correct?

- i. Price equals marginal revenue.
  - ii. Marginal revenue equals marginal cost.
  - iii. Price is greater than average total cost.
- A) i only
  - B) i and ii only
  - C) ii and iii only
  - D) i and iii only
  - E) i, ii, and iii

Answer: E



20. In the above figure, Jack's opportunity cost of producing 1 gallon of soda is \_\_\_\_\_ of bottled water.

- A) 1 gallon
- B) 1/2 of a gallon
- C) 6 gallons
- D) 1/4 of a gallon
- E) 2 gallons

Answer: E

21. Mrs. Smith operates a business in a competitive market. The current market price is \$80. At her profit-maximizing level of production, the average variable cost is \$75, and the average total cost is \$82. Mrs. Smith should

- A) shut down her business in the short run but continue to operate in the long run.
- B) continue to operate in the short run but shut down in the long run.
- C) continue to operate in both the short run and long run.
- D) shut down in both the short run and long run.

Answer: B

22. Four people each have a different willingness to pay for one unit of a good: George will pay \$15, Glen will pay \$12, Tom will pay \$10, and Peter will pay \$8. If price is equal to \$9 per unit then the quantity demanded in the market will be \_\_\_\_\_ and the consumer surplus for this unit will be \_\_\_\_\_.
- A) 4; \$8
  - B) 3; \$37
  - C) 3; \$36
  - D) 3; \$10

Answer: D

23. The cost of inflation to society includes
- A) unpredictable changes in the value of money.
  - B) higher interest rates paid by borrowers.
  - C) higher interest rates paid by the government on its debt.
  - D) the lost spending when people do not have enough money.

Answer: A

24. A free market fails:
- A) when marginal benefits equal marginal costs.
  - B) whenever there is no government intervention.
  - C) when there is government intervention.
  - D) when there is an external effect in either production, consumption, or both.

Answer: D

25. Suppose the elasticity of demand for a product is 0 and elasticity of supply is 1. If the government imposes a tax on the product, then
- A) buyers and sellers pay exactly the same share of the tax.
  - B) buyers pay all of the tax.
  - C) sellers pay all of the tax.
  - D) buyers pay a smaller share of the tax than do sellers, but both buyers and sellers pay some of the tax.
  - E) because the elasticity of demand is zero, the government collects no revenue from this tax.

Answer: B

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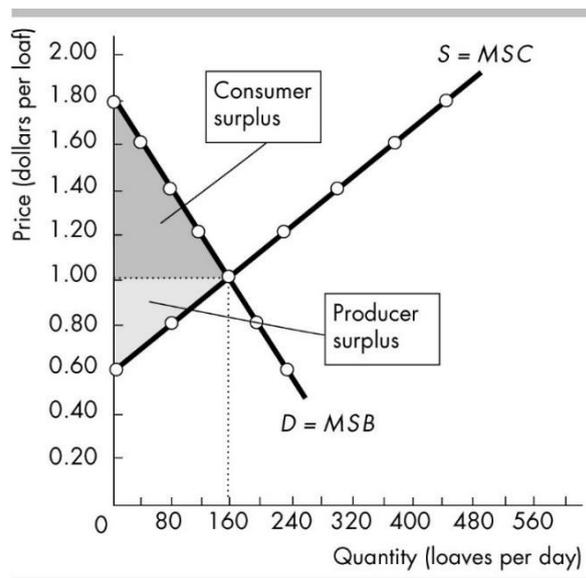
**Short Questions [25pts]**

Price (dollars per loaf)	Quantity demanded (loaves per day)	Quantity supplied (loaves per day)
0.60	240	0
0.80	200	80
1.00	160	160
1.20	120	240
1.40	80	320
1.60	40	400
1.80	0	480

1. [12pts] The table above gives the demand and supply schedules for bread. Assume that the only people who benefit from bread are the people who consume it and the only people who bear the cost of bread are the people who produce it. [Hint: Drawing a graph may help you in answering the following questions.]

a) [3pts] What is the efficient quantity of bread? Briefly explain.

The efficient quantity of bread is 160 loaves per day. When 160 loaves per day are produced (\$1.00), the quantity demanded (marginal social benefit) equals the quantity supplied (marginal social cost).

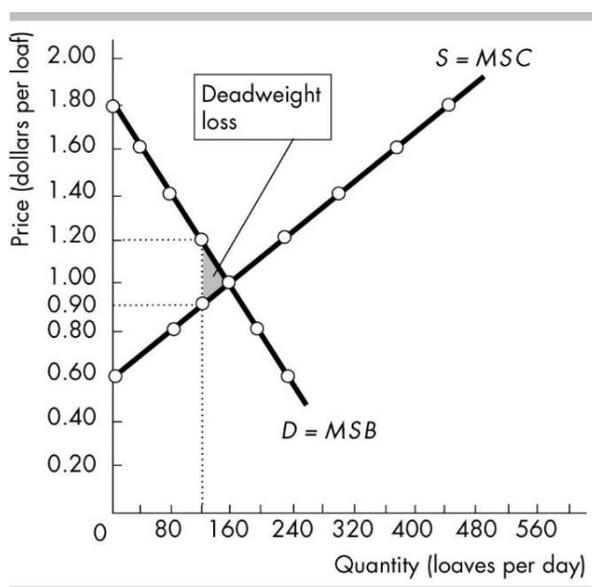


b) [3pts] If the market is efficient, what is the consumer surplus? Show your calculation.

If the market is efficient, 160 loaves of bread are sold and bought at \$1.00 per loaf. Consumer surplus is the value that consumers receive minus the price they pay summed over the quantity bought. Thus consumer surplus is the area of the indicated triangle, which equals  $1/2 \times (\$1.80 - \$1.00) \times 160 = \$64$ .

c) [3pts] If the market is efficient, what is the producer surplus? Show your calculation.

Producer surplus is the price of bread minus the marginal cost of producing it, summed over the quantity sold. Thus producer surplus is the area of the indicated triangle, which equals  $1/2 \times (\$1.00 - \$0.60) \times 160 = \$32$ .



d) [3pts] If one firm owns all the bread outlets and sells 120 loaves per day, what is the deadweight loss (if any)? Show your calculation.

The efficient quantity of bread is 160 loaves per day because when 160 loaves per day are produced, the marginal social benefit, \$1.00, equals the marginal social cost, \$1.00. If 120 loaves per day are sold, the marginal benefit exceeds the marginal cost and therefore this level of output is not efficient. As the figure above shows, the deadweight loss is the area of the triangle and equals  $1/2 \times (\$1.20 - \$0.90) \times (160 - 120)$ , which is \$6

2. [13pts] A newspaper costs \$0.15 in 1970 and \$2.00 in 2011. Workers' average wage was \$3.36 per hour in 1970 and \$23.09 in 2011.

a) [3pts] By what percentage did the price of a newspaper rise? Show your calculation.

$$(\$2.00 - \$0.15)/\$0.15 \times 100 = 1,233\%.$$

b) [3pts] By what percentage did the wage rise? Show your calculation.

$$(\$23.09 - \$3.36)/\$3.36 \times 100 = 587\%.$$

c) [4pts] In each year, how many minutes did a worker have to work to earn enough to buy a newspaper? Show your calculation.

$$\text{In 1970: } \$0.15/(\$3.36/60) = 2.7 \text{ minutes. In 2011: } \$2.00/(\$23.09/60) = 5.2 \text{ minutes.}$$

d) [3pts] Did workers' purchasing power in terms of newspapers rise or fall? Briefly explain or show your calculation.

Workers' purchasing power in terms of newspapers fell.