ECO201: PRINCIPLES OF MICROECONOMICS

FIRST MIDTERM EXAMINATION

Prof. Bill Even

November 12, 2015

FORM 1

Directions

1. Fill in your scantron with your unique-id and the form number listed on this page. Proper completion of this step of the directions is worth the equivalent of one question.

2. There are 50 multiple choice questions. All answers should be recorded on the scantron sheet. No credit will be given for answers placed elsewhere. Record your answers on the exam as well because this will be the record of your answers which you can use to determine which questions you got right or wrong on the exam.

3. A calculator is allowed. Cell phones or any other electronic device are prohibited. Access to any electronic device other than a calculator will be treated as a case of academic dishonesty.

4. You have until the end of the class period to finish the exam and complete the scantron. Additional time may be purchased at a price of 5 percentage points per minute.
The figure shows the market for helicopters in the United States, where \( D \) is the domestic demand curve and \( S \) is the domestic supply curve. **The world price of a helicopter is $36 million.**

1) In the figure above, the United States ________ helicopters per year.
   A) exports 480  B) imports 480  C) imports 240  D) exports 720

2) In the figure above, international trade ________ producer surplus in the United States by ________.
   A) decreases; $1.92 billion  B) increases; $3.6 billion
   C) decreases; $2.88 billion  D) increases; $4.8 billion

3) A country opens up to trade and becomes an importer of a sugar. In the sugar market, consumer surplus will ________, producer surplus will ________, and total surplus will ________.
   A) decrease; decrease; decrease  B) decrease; increase; increase
   C) increase; decrease; decrease  D) increase; decrease; increase

4) Reducing a tariff will ________ the domestic production of the good and ________ the total domestic consumption of the good.
   A) increase; decrease  B) decrease; decrease  C) decrease; increase  D) increase; increase

5) In the figure above, international trade ________ consumer surplus in the United States by ________.
   A) decreases; $2.88 billion  B) increases; $2.88 billion
   C) decreases; $1.92 billion  D) increases; $4.8 billion
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 $16 per shirt.

6) In the figure above, an $8 tariff would decrease U.S. imports of shirts by _______ million shirts per year.
   A); 8  B) 16  C) 24  D) 32

7) At the world price of $16, the U.S. will
   A) import 48 million shirts  B) import 24 million shirts
   C) export 48 million shirts  D) export 24 million shirts

8) In the figure above, U.S. producers' _______ from an $8 tariff would be _______.
   A) gain; $128 million  B) gain; $80 million  C) loss; $362 million  D) none of the above
9) When the United States imposes an import quota on a good, the amount of the ________ in U.S. consumer surplus is ________ the amount of the ________ in U.S. producer surplus.
A) decrease; larger than; increase
B) decrease; larger than; decrease
C) decrease; equal to; increase
D) increase; smaller than; increase

10) Who benefits from an import quota on a good?
A) Foreign governments
B) Domestic producers of the good
C) Domestic consumers of the good
D) Foreign producers of the good

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 $16 per shirt.

11) In the figure above, the deadweight loss from an $8 tariff is ________.
A) zero
B) $32 million
C) $64 million
D) $128 million

12) In the figure above, the $8 tariff ________ the domestic production of shirts in the United States by ________ per year.
A) decreases; 8 million
B) decreases; 16 million
C) increases; 8 million
D) increases; 16 million

13) In the figure above, the U.S. government’s revenue from the tariff is ________.
A) $98 million
B) $64 million
C) $128 million
D) $32 million
14) Consider a market that is initially in equilibrium with quantity demanded equal to quantity supplied at a price of $20. If the world price of the good is $10 and the country opens up to international trade. In this market
A) imports will increase, price will fall, and quantity supplied will fall
B) imports will increase, price will decrease, and the supply curve will shift to the left
C) quantity demanded will decrease, quantity supplied will decrease, and price will decrease
D) exports will increase, price will be unchanged, and quantity supplied will increase

15) Wanda takes $3,000 from her savings account that pays 5 percent interest per year and uses the funds to purchase a computer for $3,000 for her business. At the end of the year the computer is worth $2,000. Wanda pays an implicit rental rate of _______ a year.
A) $1,150    B) $4,000    C) zero    D) $3,150

16) Heidi quit her job as a chef making $40,000 per year to start her own restaurant. The first year, Heidi’s restaurant earned $100,000 in revenue. Heidi pays $50,000 per year in wages to the waitresses and hostess and $20,000 per year to buy food. What is Heidi’s economic profit for the year?
A) $30,000    B) -$10,000    C) $50,000    D) $80,000

17) Emma owns a firm that produces umbrellas. Currently, Emma produces 2,500 umbrellas a day. Emma cannot produce more umbrellas in a day unless she purchases another machine or else hires more workers. Emma is ________ efficient.
A) economically    B) technologically    C) capital and labor    D) cost

| Techniques that produce 100 sweaters |
|-------------------------------|-----------------|-----------------|
| Technique | Labor (hours) | Capital (machines) |
| A         | 10             | 35               |
| B         | 25             | 25               |
| C         | 10             | 60               |
| D         | 30             | 20               |

18) In the above table, the technique that is never economically efficient is
A) A.    B) B.    C) C.    D) D.

19) Using the data in the above table, if the price of an hour of labor is $20 and the price of a unit of capital is $10, then the most economically efficient technique for producing 100 sweaters is
A) A.    B) B.    C) C.    D) D.

20) The principal-agent problem is the issue of inducing
A) agents and principals to work hard.    B) agents to act in the best interests of principals.
C) principals to act in the best interests of agents.    D) None of the above answers is correct.

21) Which types of firms have limited liability?
A) proprietorships    B) corporations and partnerships
C) partnerships    D) corporations
22) _______ account for the largest portion of all firms; _______ account for most of the total revenue received by businesses.
A) Corporations; proprietorships  B) Proprietorships; partnerships
C) Partnerships; corporations  D) Proprietorships; corporations

23) A form of business whose profits are taxed twice is
A) a corporation.
B) a partnership.
C) a proprietorship.
D) either a proprietorship or a partnership, depending on other information.

24) Suppose there are five firms in the disposable diaper market. Hug-Me’s share is 30 percent. Plumper’s share is 30 percent. Drippy’s share is 20 percent. Kool Kid’s share is 10 percent. Nappomatic’s share is 10 percent. The Herfindahl-Hirschman Index in this industry is
A) 1,350.  B) 2,400.  C) 100.  D) 900.

25) Over the years, the U.S. economy has become increasingly
A) competitive.  B) oligopolistic.  C) cartelized.  D) monopolistic.

26) If two companies want to merge and the Department of Justice is questioning the merger, the chance of approval will be improved if
A) the geographic definition of the market is narrowed.
B) the products included in the market definition are narrowed.
C) the ability that firms can monitor each other’s prices is reduced.
D) all of the above

27) Average total cost minus average variable cost _______ as output increases because _______ as output increases.
A) decreases; average fixed cost decreases
B) decreases; marginal returns diminish
C) decreases and then increases; marginal cost initially decreases and then increases
D) decreases; economies of scale are present
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28) The above table gives some of the costs of the Delicious Pie Company. What is the total fixed cost of producing 100 pies?
A) $700
B) $300
C) $400
D) More information is needed to calculate the total fixed cost.

29) A firm’s marginal cost is $30, its average total cost is $50, and its output is 800 units. Its total cost of producing 801 units is
A) less than $40,000.  B) between $40,050 and $40,080.
C) greater than $40,080.  D) between $40,000 and $40,050.

30) Based on the above figure, up to which level of output will Ike’s Ice Cream Kitchen have increasing marginal returns?
A) up to 40 gallons  B) up to 60 gallons  C) only at 0 gallons  D) up to 10 gallons
31) Dustin’s copy shop can use four alternative plants. The figure above shows the average total cost curves for Plant 1 (\(ATC_1\)), Plant 2 (\(ATC_2\)), Plant 3 (\(ATC_3\)), and Plant 4 (\(ATC_4\)). Dustin’s Plant 2 will be economically efficient if the firm produces
A) 6,000 copies per day.
B) 4,800 copies per day.
C) 2,000 copies per day.
D) 5,300 copies per day.

32) Economies of scale refer to the range of output over which
A) the marginal product of labor diminishes.
B) the long-run average cost falls as output increases.
C) the long-run average cost is less than the short-run average total cost.
D) marginal cost exceeds average cost.
33) Dustin’s copy shop can use four alternative plants. The figure above shows the average total cost curves for Plant 1 \((ATC_1)\), Plant 2 \((ATC_2)\), Plant 3 \((ATC_3)\), and Plant 4 \((ATC_4)\). Dustin’s minimum efficient scale is
A) 4,000 copies per day.
B) 6,000 copies per day.
C) 2,650 copies per day.
D) More information is needed to determine the minimum efficient scale.

![Graph showing average cost curves for different plants.]

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34) The above table gives some of the costs of the Delicious Pie Company. The marginal cost of increasing pie output from 200 to 300 pies equals \______ per pie.
A) $6  B) $8  C) $1.800  D) $1,000

35) Perfect competition arises if the ______ efficient scale of a single producer is ______ relative to the demand for the good or service.
A) maximum; small  B) minimum; small  C) maximum; large  D) minimum; large
36) Perfect competition exists in a market if
A) there are many firms producing an identical product.
B) the firm is protected by a barrier to entry.
C) there are many firms producing a similar product, each of which may have unique features.
D) the firm is always at the break-even point where it is earning only a normal profit.

37) The owners will shut down a perfectly competitive firm if the price of its good falls below its minimum
A) average marginal cost.
B) wage rate.
C) average total cost.
D) average variable cost.

38) In the above figure, if the price is $16 per unit, how many units will a profit maximizing perfectly competitive firm produce?
A) 35
B) 0
C) 30
D) 20

39) In the above figure, if the price is $16 per unit, economic profits will be
A) 0
B) $140
C) greater than 0 but less than $140
D) more than $140

40) In the above figure, if the price is $16 per unit, in the long run we would expect
A) firms would enter and the price would move toward $12
B) firms would not enter or exit and the price would stay at $16
C) firms would exit and the price would move above $16
D) firms would exit and the price would move toward $12
41) In the above figure, if this industry is a decreasing cost industry and the price is currently $16, the long run equilibrium price will be
A) $16  
B) above $12 and below $16  
C) $12  
D) below $12

42) Suppose that the grape industry is perfectly competitive and in a long run equilibrium with a price of $3 per pound. Based on this information, we know that the typical grape firm is producing an output level where
A) ATC is $3  
B) MC is $3  
C) Economic profits are zero  
D) All of the above

43) Suppose that the grape industry is perfectly competitive and in a long run equilibrium with a price of $3 per pound. If the grape industry is a constant cost industry and there is a permanent increase in the demand for grapes. In the short run, this increase in demand will ___ the price of grapes and ___ economic profits.
A) increase; increase  
B) increase; not affect.  
C) not affect; increase.  
D) not affect; not affect.

44) Suppose that the grape industry is perfectly competitive and in a long run equilibrium with a price of $3 per pound. If the grape industry is a constant cost industry and there is a permanent increase in the demand for grapes. In the long run, this increase in demand will ___ the price of grapes and ___ economic profits.
A) not affect; increase.  
B) increase; not affect.  
C) not affect; not affect.  
D) increase; increase
45) Suppose that the grape industry is perfectly competitive and in a long run equilibrium with a price of $3 per pound. If the grape industry is a decreasing cost industry and there is a permanent increase in the demand for grapes. In the long run, this increase in demand will ____ the price of grapes and ____ economic profits.
A) not affect; increase.              B) decrease; increase
C) not affect; not affect.           D) decrease; not affect.

46) Suppose that the grape industry is perfectly competitive and in a long run equilibrium with a price of $3 per pound. If the grape industry is a constant cost industry and the government adds a $1 tax per pound of grapes. In the short run, the total price of grapes paid by consumers (including the tax) will
A) increase $1
B) not change
C) increase by less than $1.
D) decrease by less than $1

47) Suppose that the grape industry is perfectly competitive and in a long run equilibrium with a price of $3 per pound. If the grape industry is a constant cost industry and the government adds a $1 tax per pound of grapes. In the long run, the total price of grapes paid by consumers (including the tax) will
A) increase by less than $1.
B) not change
C) increase $1
D) decrease by less than $1

48) Suppose that the price of gasoline increases resulting in a $.20 increase in the marginal and average variable cost per mile for taxi cabs. Assume the taxi cab industry is a constant cost industry. This will cause the price per mile for a cab ride to
A) increase by less than $.20 in the short run
B) cause prices to rise less in the long run than the short run
C) cause economic profits to fall in the long run.
D) all of the above

To answer the next two questions, use the following information. Until 2002, the U.S. government enforced a peanut quota system that allocated the rights to grow a limited number of peanuts across farmers. If a person owned 10,000 "quota pounds" they had the right to grow and sell up to 10,000 pounds of peanuts. Any excess peanuts had to be destroyed. A person could sell their quota pounds to anyone.

49) In 2000, a farmer could "rent" a quota pound for approximately $.12 per year. One would expect that the rental price for this license would increase if
A) the demand for peanuts increased or the cost of inputs used to produce peanuts increased
B) the demand for peanuts increased or the cost of inputs used to produce peanuts decreased
C) the demand for peanuts decreased or the cost of inputs used to produce peanuts increased
D) none of the above

50) In 2002, the quota program was eliminated and anyone was allowed to grow peanuts. In the long run, elimination of the program should cause:
A) the price of peanuts to fall as new peanut growers enter the market.
B) the profits of peanut growers to be unaffected
C) consumers surplus to grow among peanut consumers.
D) all of the above.
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