Directions

1. Do not open the exam until you are instructed to begin.

2. I do not tolerate academic dishonesty of any sort. In the event that I detect dishonest behavior, I will ask that the maximum possible penalty allowed by the university be imposed.

3. Fill in your name, the time of your class (9:30 or 11:00) and social security number on the scanner sheet provided.

4. There are 37 multiple choice questions in this exam. All questions have equal point value. Credit will be given only for the answers that you mark on your scanner sheet.

5. You have until the end of the class period to complete the exam. No additional time will be provided.
1. What is the present value of $1000 that would be received 10 years from today if the interest rate is 6%? (Answer rounded to the nearest dollar).
   a. $558   b. $634   c. $954   d. $1,790

2. Suppose a bank is willing to lend you money at 6% interest. If you promised to pay the bank $500 two years from today and another $500 three years from today, how much would the bank be willing to lend you today?
   a. $542   b. $637   c. $732   d. $865

3. Suppose you deposit $100 in a bank today and it earns 5% interest annually. If the interest is allowed to compound, in 30 years you would have a balance of:
   a. $250   b. $432   c. $537   d. $631

4. Which of the following statements is true? Other things remaining the same,
   a. As the price of a bond rises, the yield on the bond rises.
   b. As the price of a bond rises, the yield on the bond falls.
   c. As the coupon rate on a bond rises, the yield on the bond falls.
   d. none of the above.

5. Consider a one year bond with a maturity value of $1000 and a coupon rate of 6%. If the bond sells for $980 today, the yield on the bond is:
   a. 6.4%   b. 7.3%   c. 7.8%   d. 8.2%

6. Suppose that two firms are identical in all respects, except one. Firm A borrowed money from a bank to finance the purchase of its capital. In Firm B, the owner provided the financial resources to purchase the capital and did not take out a loan. Which of the following would be true? Firm A’s economic profits would be ____ Firm B’s economic profits. Firm A’s accounting profits would be ____ Firm B’s accounting profits.
   a. equal to; less than.   b. equal to; greater than.
   c. less than; less than.   d. greater than; greater than.

7. An advantage of a proprietorship over a corporation is:
   a. proprietorships have limited liability.
   b. proprietorships don’t have their profits taxed twice.
   c. proprietorships have greater access to financial capital.
   d. proprietorships make it easier to diversify risk across many owners.
To answer the next 5 questions, suppose that a roofing firm pays $10 per hour for labor. Its capital is fixed and the implicit rental rate is $30 per hour. Also, the table below represents the amount of roofing that can be installed with different amounts of labor.

<table>
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<tr>
<th>Number of workers</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
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<tr>
<td>Square feet of roofing per hour</td>
<td>0</td>
<td>400</td>
<td>900</td>
<td>1,200</td>
<td>1,400</td>
<td>1,500</td>
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8. Given the information provided, what is the marginal product (per hour) of the 4th worker?
   a. 200  b. 250  c. 300  d. 350

9. Given the information provided, what is the average product of labor (per hour) when there are 4 workers?
   a. 200  b. 250  c. 300  d. 350

10. What is the total cost of installing 1400 square feet of roofing per hour?
    a. $30  b. $40  c. $70  d. $160

11. What is the average total cost (per square foot) of installing 900 square feet of roofing per hour?
    a. $.056  b. $.088  c. $.10  d. $.133

12. What is the average fixed cost (per square foot) of installing 900 square feet of roofing per hour?
    a. $.033  b. $.055  c. $.088  d. $.133

13. Scale economies exist when:
    a. a firm’s long run ATC curve is downward sloping.
    b. a firm’s demand curve is downward sloping.
    c. a firm’s MC curve is upward sloping.
    d. a firm’s MR curve is downward sloping.
To answer the next 6 questions, refer to the diagram below describing the cost curves for a typical firm in the perfectly competitive pistachio industry and the supply and demand curves for pistachios.

14. At the current short run equilibrium described in the above diagram, the typical firm produces ____ pounds per year.
   a. 200       b. 250       c. 300       d. 10 million

15. At the current short run equilibrium described in the above diagram, the typical firm’s profits are:
   a. -$250       b. -$300       c. -$312.50      d. $0

16. At the current short run equilibrium, there are ____ firms.
   a. 20,000     b. 40,000     c. 60,000     d. 80,000

17. If the pistachio industry is a constant cost industry, in the long run, the price will settle at ___ and the typical firm will produce ____ pounds per year.
   a. $3.00; 200   b. $4.00; 250   c. $5.00; 300  d. none of the above.

18. If the pistachio industry is a constant cost industry, in the long run there will be ____ firms.
   a. 10,000     b. 20,000     c. 40,000     d. 60,000

19. If the pistachio industry is an increasing cost industry (i.e. there are external diseconomies), as the industry moves to the new long run equilibrium:
   a. the ATC of pistachios would begin to fall.
   b. the ATC of pistachios would begin to rise.
   c. the demand curve for pistachios would begin to shift right.
   d. the demand curve for pistachios would begin to shift left.
20. Which of the following is NOT a characteristic of a perfectly competitive industry?
   a. a downward sloping market demand curve.
   b. the firm’s demand curve is the same as its marginal revenue curve.
   c. each firm produces a product that is differentiated from that of its competitors.
   d. there are few barriers to entry into the industry.

21. Suppose that the orange industry is perfectly competitive and in a long run equilibrium. The price of an orange is currently $.20. If the industry is a constant cost industry and there is an increase in the demand for oranges, in the long run:
   a. the price of oranges will still be $.20 and there will be zero economic profits.
   b. the price of oranges will rise above $.20 and there will be positive economic profits.
   c. the price of oranges will rise above $.20 but there will be zero economic profits.
   d. the price of oranges will still be $.20 but there will be positive economic profits.

22. When a perfectly competitive industry is in a long run equilibrium,
   a. price will equal the minimum of ATC and economic profits will be positive.
   b. price will equal the minimum of ATC and economic profits will be zero.
   c. price will be above the minimum of ATC and economic profits will be positive.
   d. none of the above.

23. Assume that the market for pesticide is perfectly competitive and in a long run equilibrium. Suppose that the government suddenly imposes a licensing restriction that gives a license to all current pesticide manufacturers. New pesticide firms are allowed only if they buy a license from an old firm that goes out of business. The price that firms are willing to pay to buy a license from an old firm will increase if:
   a. the cost of producing pesticide rises or the demand for pesticide falls.
   b. the cost of producing pesticide rises or the demand for pesticide rises.
   c. the cost of producing pesticide falls or the demand for pesticide rises.
   d. the cost of producing pesticide falls or the demand for pesticide falls

24. In a perfectly competitive industry, more than the efficient level of output will be produced:
   a. all of the time.
   b. if there are positive externalities associated with production or consumption of the good.
   c. if there are negative externalities associated with production or consumption of the good.
   d. never.
To answer the next 4 questions, refer to the diagram below describing the demand and cost curves for a single-price monopoly that has the rights to sell Pete Rose's autographed baseballs. Assume there are no externalities associated with the sale of baseballs.

25. What is the profit maximizing price for this single-price monopoly?
   a. $40    b. $30    c. $22    d. $10

26. At the profit maximizing price, what would this single-price monopoly’s profits be?
   a. $0    b. $400    c. $4000    d. $1600

27. At the profit maximizing price, what is the deadweight loss associated with this single-price monopolist’s output?
   a. $0    b. $1000    c. $2000    d. $4000

28. If the monopoly was regulated and allowed to charge a price that would generate a “fair return”, the monopoly would charge a price of _____ and have economic profits of ____.
   a. $30, $4000.    b. $30, 1600.    c. $15, 0.    d. $10, 0.

29. If the monopoly was regulated and forced to charge the price that would sell the socially efficient level of output, it would charge a price of ____ and (positive, negative, zero) economic profits.
   a. $15, zero.    b. $15, positive.    c. $10, zero.    d. $10, negative.
30. Assume Plattman has a monopoly on the sale of tattoos in Oxford and is currently charging all customers the same price for a tattoo. Suppose Plattman discovers that, at the current price, men have more elastic demand for tattoos than women. If Plattman is willing to charge men and women different prices, he should raise the price for:
   a. men and lower the price for women since the marginal revenue for tattoos will be higher in the male market.
   b. women and lower the price for men since the marginal revenue for tattoos will be higher in the male market.
   c. men and lower the price for women since the marginal revenue for tattoos will be higher in the female market.
   d. women men and lower the price for men since the marginal revenue for tattoos will be higher in the female market.

To answer the next 3 questions, assume that Plattman’s tattoo parlor can sell 9 tattoos per day at $55 each; 10 tattoos per day at a price of $50 each, or 11 tattoos per day at a price of $45 each.

31. Based on this information, the marginal revenue of the 11th tattoo is ____.
   a. $45. b. $50 c. $5 d. -$5

32. Based on the above information, demand is ____ between the price of $45 and $50.
   a. elastic b. inelastic c. unit elastic

33. Suppose that the marginal cost of a tattoo is $10 no matter how many tattoos are done in a day. Combining this information with that given above, Plattman should charge a price:
   a. above $50. b. between $45 and $50.
   c. above $20 but below $45. d. between $10 and $20.

34. Which of the following causes a natural monopoly?
   a. scale economies.
   b. a patent.
   c. a government granted franchise.
   d. none of the above.
35. The largest number of firms in the U.S. are
a. proprietorships.  b. partnerships.  c. corporations.  d. underground.

According to the 11/11/98 Wall Street Journal, “the White House is considering higher cigarette taxes to cut teen smoking...” To answer the next 2 questions, suppose that the cigarette industry is perfectly competitive and in a long run equilibrium and consumers currently pay $1 per pack of cigarettes. Suppose the White House is successful, and the tax on cigarettes is increased by $.50 per pack. Also, assume that the demand curve for cigarettes is NOT perfectly inelastic.

36. The effect of this $.50 tax increase on cigarettes in the short run will be:
   a. the price consumers pay for cigarettes will rise by $.50 and the profits of cigarette manufacturers will drop.
   b. the price consumers pay for cigarettes will rise by less than $.50 and the profits of cigarette manufacturers will drop.
   c. the price consumers pay for cigarettes will not change and the profits of cigarette manufacturers will drop.
   d. the price consumers pay for cigarettes will rise by more than $.50 and the profits of cigarette manufacturers will drop.

37. If the cigarette industry is a constant cost industry, then in the long run the effect of this $.50 tax increase will be:
   a. the price consumers pay for cigarettes will rise $.50 and the profits of cigarette manufacturers will return to zero.
   b. the price consumers pay for cigarettes will rise less than $.50 and the profits of cigarette manufacturers will return to zero.
   c. the price consumers pay for cigarettes will rise $.50 and the profits of cigarette manufacturers will be negative.
   d. the price consumers pay for cigarettes will rise less than $.50 and the profits of cigarette manufacturers will be negative.

Answers:
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