ECN 201, Spring 2001 **NAME: _____**
Prof. Bruce Blonigen **SS#: _____**

MIDTERM 2 - Version B

Tuesday, May 22

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Directions: This test is comprised of 2 parts for a total of 100 points. The first part is 33 multiple choice questions, with each question worth 2 points for a total of 66 points. The second part is short answer problems worth a total of 30 points. You get 4 points for marking down your name on the test. Mark your multiple choice answers on a Scantron with a #2 pencil. Put your name and student ID number on **both** the Scantron and this test. Then hand in **both** the Scantron and the test when you are finished.

PART 1: MULTIPLE CHOICE

1. When Burger Barn hires one worker, 20 customers can be served in an hour. When Burger Barn hires two workers, 50 customers can be served in an hour. The marginal product of the second worker is _____ customers served per hour.

a) 15.
b) 30.
c) 40.
d) 70.

2. Tom runs a grocery store and is earning normal profit. We can deduce that

a) Tom is making economic profit as well.
b) Tom will remain in the grocery store business.
c) Tom will leave the grocery store business.
d) Tom's total costs exceed his total revenue.

3. Suppose the price of hamburgers falls and you eat more hamburgers because they are cheaper than chicken sandwiches. This is an example of

a) the substitution effect.
b) the income effect.
c) the law of diminishing marginal utility.
d) the law of increasing demand.

4. Which of the following is NOT a decision over which a perfectly competitive firm has much control?

a) How much to produce.
b) What price to charge.
c) How to produce.
d) How much of each input to use.

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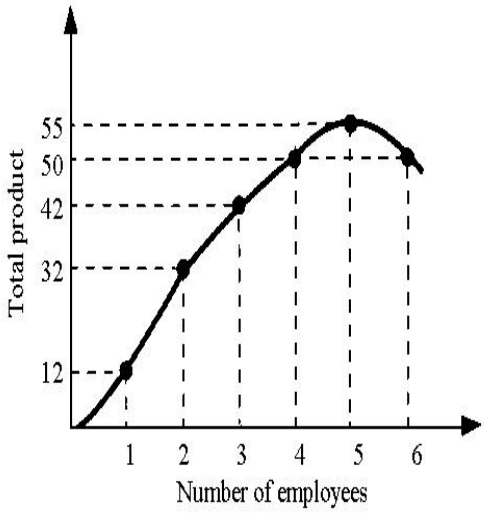

Figure 7.9

5. The marginal product of the third worker is

a) 5.
b) 8.
c) 10.
d) 50.

6. The average product of the fifth worker is

a) 1.
b) 5.
c) 11.
d) 275.

7. If diminishing marginal returns have already set in for The Picture Perfect Framing Store and the marginal product of the fifth picture framer is 20, then the marginal product of the sixth picture framer must be

a) negative.
b) zero.
c) less than 20.
d) greater than 20.

SITUATION 1: You are the owner and only employee of a company that digs ditches. Last year you earned a total revenue of $100,000. Your costs for equipment, rent and supplies were $50,000. Your next best alternative is a job at a different ditch digging company that pays $20,000 a year.

8. Refer to SITUATION 1. The actual economic profit for your ditch digging company last year was

a) $20,000.
b) $30,000.
c) $50,000.
d) Cannot determine from the given information.

9. Refer to SITUATION 1. A yearly normal profit for your ditch digging company would be

a) $20,000.
b) $40,000.
c) $60,000.
d) $100,000.

10. If the Pumpkin Patch, a perfectly competitive firm, is earning "normal profit," you can deduce that this firm is producing where

a) P > MC.
b) P > AVC.
c) P < ATC.
d) TR > TC.

11. The condition in which the economy is producing what people want

a) equity.
b) allocative efficiency.
c) productive efficiency.
d) positive analysis.

12. The short run average total cost curve is U-shaped because of

a) economies of scale.
b) the constraint that the firm cannot change production technologies.
c) diminishing marginal returns.
d) increasing returns to scale.

13. Which of the following is a correct statement about the relationship between average variable cost (AVC) and marginal cost (MC)?

a) If MC exceeds AVC, then AVC is rising (that is, AVC has a positive slope at that point).
b) If MC = AVC, then MC is at a minimum.
c) If AVC is falling, then MC must be falling at that level of output as well.
d) If MC exceeds AVC, then AVC is falling.

14. If the average variable cost (AVC) of the 5th hat is $30, then the total variable cost (TVC) of 5 hats is

a) $6.
b) $150.
c) $1500.
d) $1800.

15. As long as economic profits are being earned in an industry, firms will _____ the industry and the supply curve will shift to the _____.

a) enter; right.
b) enter; left.
c) exit; left.
d) exit; right.

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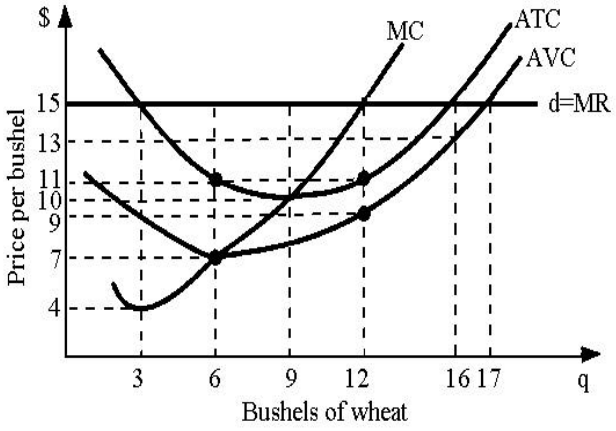

Figure 9.1
This represents the cost and demand conditions facing a wheat farmer

16. Refer to Figure 9.1. For this farmer to maximize profits, he should produce _____ bushels of wheat.

a) 6
b) 9
c) 10
d) 12

17. Refer to Figure 9.1. What are average fixed costs (AFC) at a quantity of 6?

a) $ 0.67.
b) $ 4.00.
c) $ 7.00.
d) $ 11.00.

18. Refer to Figure 9.1. At a quantity of 16, the wheat farmer will

a) make zero economic profit.
b) make economic profit.
c) make an economic loss.
d) minimize profits.

19. Refer to Figure 9.1. At what level of quantity does diminishing marginal returns begin?

a) 3 bushels.
b) 6 bushels.
c) 9 bushels.
d) 12 bushel.

20. Refer to Figure 9.1. The farmer will just break even in equilibrium if price is

a) $ 0.67.
b) $ 4.00.
c) $ 7.00.
d) $ 10.00.

21. Stereo Sound Unlimited has a monopoly over the installation of quadraphonic sound systems. If Stereo Sound Unlimited's total revenue from installing 10 sound systems is $20,000 and its total revenue from installing 11 sound systems is $18,000, what is the marginal revenue of the eleventh sound system?

a) $2000.
b) $3800.
c) -$2000.
d) -$1000.

22. A pure monopoly is an industry with a single firm that produces a product for which there are

a) no close substitutes and no barriers to entry.
b) many close substitutes and no barriers to entry.
c) no close substitutes and barriers to entry.
d) many close substitutes and barriers to entry.

23. Society will produce the efficient mix of output if all firms produce in the long-run such that

a) price equals marginal cost.
b) price equals average variable cost.
c) marginal cost equals average variable cost.
d) price equals average fixed cost.

24. To sum up individual demand curves into an overall market demand curve, one

a) adds up prices for all individual consumers for a given quantity demanded.
b) adds up quantities demanded by all individual consumers for a given price.
c) adds up the MC schedules for each consumer above their minimum AVC.
d) adds up the MC schedules for each consumer above their minimum ATC.

25. Suppose there is a permanent shift of consumer preferences away from pretzels and toward potato chips. If these are perfectly competitive industries, the most likely result

a) in the short run is economic losses in the potato chip market.
b) in the long run is a fall in the supply of potato chips.
c) in the short run is a rise in the price of pretzels.
d) is short-run profits in the potato chip market.

26. Which of the following is a variable cost for an airline flight from Portland to Eugene?

a) The pilot's salary.
b) Refreshments provided on the flight.
c) Cost of routine maintenance inspection before the flight.
d) Cost of the air traffic controller's salary.

27. The Supply Room, a mail-order school supply store, grew rapidly, and as a result of achieving a much larger size, the Supply Room was able to realize: (1) volume discounts when buying from its suppliers, and (2) lower transport costs by shipping in bulk. The best explanation of this is that the Supply Room was experiencing

a) economies of scale.
b) constant returns to scale.
c) diseconomies of scale.
d) diminishing marginal returns.

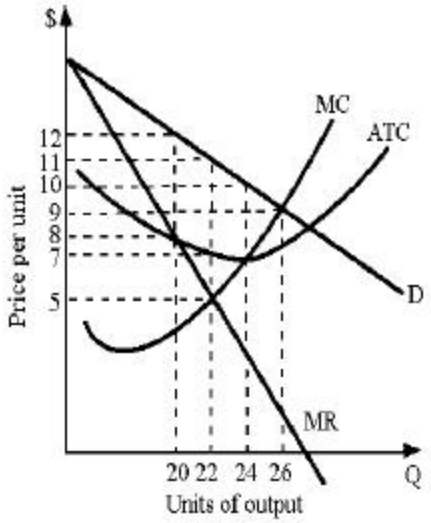

Figure 13.5

28. Refer to Figure 13.5. If this firm is producing 24 units at a price of $10, the firm's profit will be:

a) $72.
b) $80.
c) $88.
d) $132.

29. Refer to Figure 13.5. The profit maximizing level of output for this monopolist is _____ units of output.

a) 20.
b) 22.
c) 24.
d) 26.

30. Refer to Figure 13.5. At the profit maximizing level of output, which of the following is true?

a) Price equals MC.
b) Price does not equal MC.
c) ATC is minimized.
d) ATC is maximized.

31. If a firm in a perfectly competitive industry raises price above market price,

a) its total revenues will remain the same.
b) its profit will increase.
c) its sales will drop to zero.
d) its demand curve will become downward sloping.

32. Your local golf course lets you golf for half price every May and, given your limited income, this allows you to not only golf more, but go to more movies as well. This increase in movie watching (a substitute for golfing) is an example of

a) the substitution effect outweighing the income effect.
b) the income effect outweighing the substitution effect.
c) the law of diminishing marginal utility.
d) the law of increasing demand.

33. Every point on the long-run average cost curve represents

a) the minimum cost at which the associated output level can be produced when the scale of plant can be changed.
b) the minimum point of the associated short-run average cost curve.
c) the minimum cost at which the associated output level can be produced when the scale of the plant cannot be changed.
d) both b and c.

Turn to next page for short answer questions

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PART 2: SHORT-ANSWER PROBLEMS

PAINTING BUSINESS (Questions 1-7). Suppose a college student, Fred, has his own house painting business in Eugene one summer. We'll assume that Fred initially has no fixed costs, as he uses old paint brushes he finds in his father's garage. Fred's only costs then are for paint, which costs $0.05 per square foot, and labor, which costs $50 per worker per day. The production process shows diminishing marginal product of labor according to the following schedule, where L is the number of workers, and MP is the marginal product in terms of square feet painted in one day:

Number of workers	Marginal Product	Total Product (or Quantity)	TVC (worker's costs and paint costs)	Marginal Cost (per sq. feet)
0	0 (square feet)			----------
1	120			
2	240			
3	480			
4	360			
5	240			
6	120			
7	60			

1) Complete the table above.

2) If the house painting business in Eugene is perfectly competitive and the market price is $0.25 per square feet, how many workers would Fred employ, and what would be the total amount of square feet painted per day by his paint crew?

Workers employed: _____
Square feet painted: _____

3) Assume Fred's next best alternative to owning this business (i.e., opportunity cost) would be to work as a painting supervisor for another house painting firm for $75 a day. Calculate total profits per day for Fred including his opportunity cost into total costs:_____

4) Is Fred making normal profit? _____
Is Fred making economic profit? _____
Would he stay in this business? Explain briefly.: _____

Suppose that a construction boom in Eugene leads to the market price per square feet painted rises from $0.25 to $0.30.

5) If the house painting business in Eugene is perfectly competitive at the new market price of $0.30 per square feet, how many workers would Fred employ, and what would be the total amount of square feet painted per day by his paint crew?

Workers employed: _____
Square feet painted: _____

6) Assuming Fred's next best alternative to owning this business would be to work as a painting supervisor for another house painting firm for $75 a day. Calculate total profits per day for Fred including his opportunity cost into total costs: _____

7) Is Fred making normal profit? _____
Is Fred making economic profit? _____
Would he stay in this business? Explain briefly.: _____

CORPORATE TRAVEL COSTS (Questions 8-10). The May 8, 2001 Wall Street Journal article, "Corporate Travel Feels the Pinch," discusses how companies have recently been reducing travel costs by its employees. We'll assume that travel costs are part of variable costs, not fixed costs. Additionally, assume that the companies are in perfectly competitive industries.

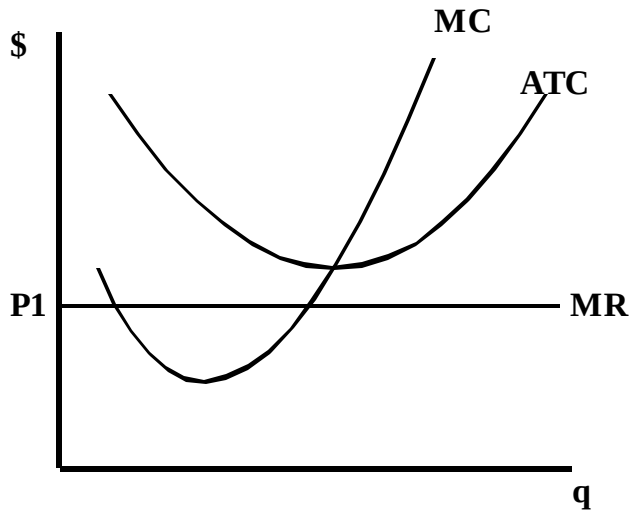

Figure A: Perfectly Competitive Firm

8) Figure A depicts a perfectly competitive firm that is making a loss. Show in the diagram how a reduction in travel costs can allow the firm to make normal profit (zero economic profit). Clearly mark shifts in the various schedules that are affected.

Show what happens to optimal quantity by the firm as well.

9) If reducing travel has the added feature that it reduces productivity, explain why it might mean the firm in figure A makes an even bigger loss, rather than breaking even, from the reduction in employee travel. (Hint think about what lower productivity would do to the MC and ATC schedules generally).

10) Suppose that before firms were able to reduce travel costs, some firms quickly exit the industry. Explain how this exit might lead to the remaining firms becoming profitable again, with no reduction in travel costs.