Test 3 – Econ 3144 Name________________________
Spring 2006 - Dr. Rupp
20 Multiple Choice Questions (50 points) & 4 Discussion (50 points) Signature_____________________
"I have neither given nor received aid on this exam"

Use this table to answer questions 1-4:

Q	ATC	AVC	MC
1	44	4	4
2	28	8	12
4	26	16	32
6	30.667	24	48
8	37	32	64

1. At a price of $48, how many units of output will this firm produce in the **short run**?
   A) 0 (since closed in short run)
   B) 2
   C) 4
   D) 6
   E) 8
2. At a price of $48, how many units of output will this firm produce in the **long run**?
   A) 0 (since closed in long run)
   B) 2
   C) 4
   D) 6
   E) 8
3. What is the profit (or loss) at price of $48 in the **short run**?
   A) $0
   B) -$104
   C) $64
   D) -$64
   E) $104
4. Producing the number of units suggested in question (1), how much is the producer surplus?
   A) $0
   B) $128
   C) $104
   D) $144
   E) $80
5. If a competitive firm doubles output than its total revenue will
   A. Double
   B. More than double
   C. Less than double
   D. Cannot be determined

6. If a competitive firm is producing a level of output where marginal revenue exceeds marginal cost, the firm could increase profit if it:
   A. Increases production
   B. Decreases production
   C. Maintain the current level of production
   D. Temporarily shut down

7. A grocery store should close at night if the
   A. total costs of staying open are greater than the total revenue due to staying open.
   B. total costs of staying open are less than the total revenue due to staying open.
   C. variable costs of staying open are greater than the total revenue due to staying open.
   D. variable costs of staying open are less than the total revenue due to staying open.

Use the following information to answer questions #8 - #10. A perfectly competitive firm has a total cost function of: $TC = 0.2Q^2 - 5Q + 22$ and $MC = 0.4Q - 5$. The firm faces a price of $3.

8. How much are fixed costs?
   A. 3
   B. 22
   C. 2
   D. 16
   E. 12

9. How much quantity in the short-run should the firm sell?
   A. 0 (better to be closed in the short-run)
   B. 3
   C. 2
   D. 20
   E. 12

10. How much profit does the firm earn?
   A. 57
   B. 62
   C. 58
   D. 2
   E. 60

11. Accounting profit is defined as:
   A. total revenue – implicit costs
   B. total revenue – explicit costs
   C. total revenue – implicit costs – explicit costs
   D. total revenue – implicit costs + explicit costs
   E. total revenue + implicit costs + explicit costs

Use the following information to answer questions 12-14: the demand in the perfectly competitive cotton industry is: $P = 70 - Q$, the $MC = 10 + 2Q$.

12. Find the profit maximizing output in the perfectly competitive cotton industry in the **short-run**.
   A) 5
   B) 8
   C) 10
   D) 15
   E) 20

13. Find the profit maximizing price in the perfectly competitive cotton industry in the **short-run**.
   A) $20
   B) $55
   C) $50
   D) $60
   E) $25

14. Find the consumer surplus in the perfectly competitive cotton industry (Hint, graph it).
   A) $112.50
   B) $50
   C) $600
   D) $400
   E) $200

15. Which of the following is ***not*** an assumption of the theory of perfect competition?
A. There are many sellers and many buyers
B. All firms in the market sell an identical product
C. The government sets the price
D. All consumers and firms have perfect information
E. Firms can enter and exit freely

16. Selling the same good (like a coach-class seat on an airplane) at different prices is called:
A. product differentiation
B. mark-up pricing
C. price leadership
D. price discrimination
E. marginal cost pricing

17. Which of the following factors does ***not*** lead to a monopoly?
A. control over a key input
B. diseconomies of scale
C. patent
D. government licenses

18. In order for a firm to be a monopoly, the firm must have which of the following characteristics:
A. single seller of a good & be a large company
B. single seller of a good & be a small company
C. single seller of a good & be a non-profit company
D. single seller of a good & have no close substitutes

19. Perfect price discrimination describes a situation in which the monopolist
A. Knows the exact willingness to pay of each of its consumers
B. Charges exactly two different prices to exactly two different groups of customers
C. Maximizes consumer surplus
D. Experiences a zero economic profit

20. At a price of \$32, the monopolist is current producing: Q = 10, the ATC = \$12, AVC = \$8, MR = \$16 & MC = \$20. How can this monopolist increase profits?
A. Increase quantity.
B. Reduce quantity.
C. Keep quantity the same since already maximizing profits.
D. Shut down since losing money.

Extra credit: (+2.5 points each)
21. Which of the following is ***not*** a barrier to entry in a monopolized market?
a. The government gives a single firm the exclusive right to produce a good.
b. The costs of production make a single producer more efficient than a large number of producers.
c. A key resource is owned by a single firm.
d. A single firm is very large.

22. Which of the following statements about price (P) and marginal cost (MC) in competitive and monopolized markets is true?
A) In competitive markets, P = MC; in monopolized markets, P = MC.
B) In competitive markets, P > MC; in monopolized markets, P = MC.
C) In competitive markets, P > MC; in monopolized markets, P > MC.
D) In competitive markets, P = MC; in monopolized markets, P > MC.

II. Discussion Questions (12.5 points per discussion question)

1. A perfectly competitive firm has the cost curves: MC = 2 + 4Q and AVC = 4 + 2Q.
a. How many units of output (if any) will it produce at a market price of $10?

b. What level of fixed costs will this firm earn zero economic profit?

c. Lightly shade the producer surplus in the graph below. ***Label all curves!***

P

Q

d. How much is the producer surplus?

2. There are 8 identical firms in the textbook industry. Each has the same short-run marginal cost of: SMC = 3 + 2Q. The demand curve for textbooks is: P = 20 – 2Q

A. Find the market supply curve.

B. Graph the market supply curve and market demand curve on one graph below. ***Label all curves!***

P

____Q

C. On the graph above, pin stripe the consumer surplus region & lightly shade the producer surplus.

D. How much is the consumer surplus? How much is the producer surplus?

3. A monopoly has a demand curve of: $P = 116 - 4Q$, total cost: $TC = 20Q + 10$ and marginal cost: $MC = 20$.

A. Find the profit maximizing quantity.

B. Find the profit maximizing price.

C. Find the profit.

D. On a graph below pin stripe the producer surplus.

E. On the same graph, heavily shade the consumer surplus.

F. On the same graph, lightly shade the deadweight loss.

4. Given fixed cost = $10 and marginal cost = $12 per unit produced.

Total Product	**P**	**TC**	**TR**	**MR**	**Profit**
0	16			--	
1	15				
2	14				
3	13				
4	12				
5	11				
6	10				

a) Fill in every blank in the table above. (4.5 points)

b) Will this monopolist produce in the short run? If yes, how much does it produce? (2 points)

c) Will this monopolist produce in the long run? If yes, how much will it produce? (2 points)

d) How much profit or loss does the monopolist incur in the short run? (2 points)

e) How much profit or loss does the monopolist incur in the long run? (2 points)

Answer Key

	Test 3
1	D
2	D
3	E
4	D
5	A
6	A
7	C
8	B
9	D
10	C
11	B
12	E
13	C
14	E
15	C
16	D
17	B
18	D
19	A
20	B
21	D
22	D