Test 1 – Econ 5000
Spring 2004 - Dr. Rupp

Name________________________________

Sign Pledge____________________________
"I have neither given nor received aid on this exam"

25 Multiple Choice Questions (worth 3 points each)

1. The perfectly competitive firm has ATC = 12/Q + Q, MC = 2Q, and TC = 12 + Q^2. If the profit maximizing output is 2, how much are fixed cost?
   a. 4
   b. 8
   c. 12
   d. 14
   e. 16

2. A perfectly competitive firm is said to be a:
   a. price maker
   b. price taker

3. What two events in the 1890s enable national breweries in the US?
   a. TV & radio
   b. Thirteenth amendment & tax law changes
   c. Interstate highways & gasoline
   d. Trucks from Ford Motor Company & carbonation
   e. Refrigeration & pasteurization

4. Which state has the highest per capita beer consumption in the U.S.?
   a. Alaska
   b. Nevada
   b. New York
   c. Wisconsin
   a. Utah

5. What is the single largest cost item in a glass of beer?
   a. hops
   b. malt
   c. taxes
   d. water
   b. barley

6. If MC = 2Q, AVC = 2Q, and P = $100, this perfectly competitive firm will break-even if fixed cost are
   a. $0
   b. $50
   c. $100
   d. $4,900
   e. $5,000

7. Which type of externality exists in the beer industry?
   a. Negative externality
   b. Positive externality

8. Determine the returns to scale of the following function: Q = 4KL
   b. Constant Returns to Scale
   c. Decreasing Returns to Scale
   d. Increasing Returns to Scale

9. Which country has more breweries?
   c. Germany
   d. United States

10. What kind of economies of scale exist in the beer industry?
   b. Diseconomies of scale
   c. Economies of scale
   d. Constant returns to scale

Exhibit 1

Q	AFC	AVC	ATC	TC	MC	TR	Profit
0	--	--	--		--		
1					10		
2					8		
3					5		
4					3		
5					4		
6					8		
7					10		
8					14		

Use Exhibit 1 and the following information, fixed cost = $10 and this perfectly competitive firm receives $10 for each item they sell.

11. What is the AVC at Q=5?
   a. 4
   b. 5
   c. 6
   d. 8
   e. 30

12. What is the profit-maximizing quantity for the firm in the short-run?
   a. 0 (Shut down)
   b. 1
   c. 5
   d. 7
   e. 8

13. At the profit-maximizing quantity, how much profit (or loss) does the firm earn in the short-run?
   a. -$10
   b. $0
   c. $22
   d. $10
   e. $12

14. Which of the following is a true statement?
    b. The price elasticity of demand for beer is more elastic than the demand for an individual beer brand (i.e., Coors).
    c. The price elasticity of demand for an individual beer brand (i.e. Coors) is more elastic than the demand for beer.

15. Which of the following is an assumption of Perfectly Competitive markets?
    b. One buyer and one seller
    c. Prices are regulated by government
    d. Firms can enter and exit freely
    e. All goods are unique
    f. Buyers and sellers have imperfect information

Use the following information to answer the next four questions. The market demand for cotton is:
P = 60 – Q and MC = 10 + Q. Assume the cotton market is perfectly competitive.

16. Calculate the quantity of cotton sold.
    b. 15
    c. 20
    d. 25
    e. 30
    f. 35

17. Calculate the price of cotton.
    b. 25
    c. 30
    d. 35
    e. 40
    f. 45

18. Calculate the consumer surplus from cotton.
    b. 875.00
    c. 250.50
    d. 300.00
    e. 625.00
    f. 312.50

19. Calculate the producer surplus from cotton.
    b. 875.00
    c. 250.50
    d. 300.00
    e. 625.00
    f. 312.50

20. Calculate the Herfindahl-Hirschmann Index if Firm A, B, and C have 40%, 30% and 30% market share, respectively.
    b. 100
    c. 3,400
    d. 4,600
    e. 10,000
    f. 36,000

21. The expense of entering the beer industry is said to be:
   b. considerable
   c. minimal

22. Which of the following curves is said to be the supply curve for the perfectly competitive firm?
   b. AFC
   c. ATC
   d. AVC
   e. MC
   f. MR

23. What is the minimum efficient scale?
   b. Minimum point of MC
   c. Minimum point of AVC
   d. Minimum point of long-run ATC
   e. Minimum point of AFC
   f. Minimum point of short-run ATC

24. What is the "Chicago School"?
   b. The University of Illinois at Chicago
   c. A mathematical approach to solving economic problems
   d. A belief that governments should avoid budget deficits
   e. A claim that market conditions influence conduct and performance
   f. Firms operate efficiently so the government should not interfere

25. If the price is below the ATC curve and above the AVC curve then
   b. The firm should shut-down immediately
   c. The firm should shut-down in the long-run, yet open in short-run
   d. The firm should be open in both short-run & long-run

Extra credit: (+3 points)
Use the following table to answer the extra credit question below:

Q	ATC
10	10
11	11
12	12

Given the profit maximizing quantity is Q=11. At what price are you willing to produce a 12th unit?

Discussion Questions

2. Perfectly competitive firms are price takers since they take their price from the market. Draw two graphs below: a graph for the cotton industry and cotton farmer. Show the following: (5 pts)
   - Market price of cotton being $10 per bale.
   - Equilibrium industry quantity is 100 million bales of cotton.
   - Equilibrium quantity for the farmer is 40 bales of cotton.
   - Show the cotton farmer breaks even
   - Label this equilibrium point "A" on both graphs

Cotton Industry

P

______________________________________Q
(millions of bales)

Cotton Farmer

P

____________________________________Q
(bales)

3. Explain in words and show on the diagram above, what would happen to the U.S. cotton market if Americans suddenly become more patriotic and start buying more "Made in the USA cotton". Label this new (short-run) equilibrium point "B" (on your graphs in question #1 above) (4 points)

4. Explain in words and show on the diagram above, what happens in the long-run to the U.S. cotton market. Label this new (long-run) equilibrium point "C" (on the graphs in question #1 above) (4pts)

5. In the post-WWII period what has happened to the market concentration of the U.S. beer industry? Why has this change occurred? (4 pts)

6. What is the survivor test? What does it indicate about the beer industry? (4 pts)

7. Briefly discuss two beer industry current events that have occurred since 2000. (4 pts)