

25 Multiple Choice Questions (worth 3 points each)

Use the following information to answer questions 1-4. The balloon industry has 20 producers all with identical short-run total cost and short-run marginal cost curves:

- $STC(Q) = 16 + Q^2$
- $SMC(Q) = 2Q$

Where  $Q$  is the annual output of a firm and  $P$  is the market price. The market demand curve for balloons is:

- $D(P) = 110 - P$

1. What is the **firm's** short-run supply curve?

- $Q^s = 2$
- $Q^s = 2P$
- $Q^s = 10P$
- $Q^s = 20P$
- $Q^s = \frac{1}{2} P$

2. What is the short-run **market** supply curve?

- $Q^s = 200P$
- $Q^s = 2P$
- $Q^s = 10P$
- $Q^s = 40P$
- $Q^s = 40$

3. What is the short-run equilibrium price?

- $P = 10$
- $P = 73.33$
- $P = 36.67$
- $P = 5.24$
- $P = 108$

4. What is the quantity in this industry?

- 36.67
- 73.33
- 40
- 2
- 100

5. What kind of returns to scale exist for the following production function:  $Q = 10K/L$

- Constant returns to scale
- Decreasing returns to scale
- Increasing returns to scale
- Marginal returns to scale

6. True/False: The intersection of marginal cost (MC) and average variable cost (AVC) is where AVC reaches its minimum.

- True
- False

Use the following information to answer questions 7 & 8. Each firm in a perfectly competitive market has a short-run marginal cost curve:  $SMC(Q) = 2Q$ , where  $Q$  is annual output of each firm. Each firm will shutdown if price is less than \$20 per unit. The market demand is:  $D(P) = 240 - P/2$ , where  $P$  is the market price. At the equilibrium price each firm produces 20 units.

7. What is the equilibrium market price?

- a. \$120
- b. \$160
- c. \$40
- d. \$20
- e. \$80

8. How many firms are there in this industry?

- a. 8
- b. 9
- c. 6
- d. 11
- e. 10

9. Which brewer is the 2<sup>nd</sup> largest in the U.S.?

- a. Anheuser-Busch
- b. Coors
- c. Corona
- d. Pabst
- e. SABMiller

10. What is the definition of consumer surplus?

- a. The difference between your gross pay and your take home pay
- b. The difference between total revenue and total variable cost
- c. Sales tax revenue from a consumer purchase
- d. The difference between willingness to pay and price
- e. The difference between price and marginal cost

11. Tyrone is an ECU student who signed a 12 month lease beginning in September 2004. Tyrone's rent is \$500 per month. Tyrone will graduate in May 2005 and move to San Francisco at the end of May. He sublets his apartment to a friend for \$400 during the three summer months. What are Tyrone's sunk cost from this lease?

- a. \$6,000
- b. \$1,200
- c. \$1,500
- d. \$100
- e. \$300

12. What is the minimum efficient scale of production?

- a. Minimum point of average fixed cost
- b. Minimum point of marginal cost
- c. Minimum point of average variable cost
- d. Minimum point of average total cost
- e. Minimum point of total cost

13. Whose measure of profits (the accountant or economist) will likely be larger?

- a. Accountant
- b. Economist

14. A firm should close in the long run if it's price is below:
- Average fixed cost
  - Average total cost
  - Average marginal cost
  - Average variable cost
  - Total variable cost
15. What rule does the perfectly competitive firm use to maximize profits?
- Set supply equal to demand
  - Set marginal cost equal to average variable cost
  - Set average fixed cost equal to average total cost
  - Set price equal to marginal revenue
  - Set marginal cost equal to marginal revenue
16. What does marginal cost mean in words?
- additional cost to produce one more
  - additional cost incurred to close in the short run
  - the unrecoverable portion of fixed cost
  - additional profit from making one more
  - additional cost incurred from closing in the long run

Use the following information to answer the next three questions. If the market price is \$30, and short-run total cost curve for a firm:  $STC(Q) = 100 - 10Q + 20Q^2$  and short-run marginal cost:  $SMC(Q) = -10 + 40Q$ .

17. Find the profit maximizing quantity in the short-run:
- 0
  - 1
  - 2
  - 3
  - 4
18. Find the profit in the short-run:
- \$0
  - \$30
  - \$80
  - \$110
  - \$100
19. Calculate the profit in the long-run:
- \$0
  - \$30
  - \$80
  - \$110
  - \$100
20. Which country is expected to have the largest growth in beer sales during the next 10 years?
- Australia
  - Canada
  - China
  - United States
  - Germany

21. Which of the following was the first light beer?
- a. Bud Light
  - b. Coors Light
  - c. Natural Light
  - d. Milwaukee's Best Light
  - e. Miller Lite

Use the following information to answer the next two questions. An industry has a market demand curve

- $P = 70 - Q$

And market supply curve:

- $MC = 10Q + 4$

22. Find the consumer surplus

- a. 100
- b. 66
- c. 18
- d. 180
- e. 192

23. Find the producer surplus

- a. 100
- b. 66
- c. 18
- d. 180
- e. 192

24. The U.S. is a net importer or a net exporter of beer?

- a. Net importer
- b. Net exporter

25. True/False: According to blind taste tests, most people are not able to tell the difference between a “super-premium” beer and a “budget” beer.

- a. True
- b. False

Extra Credit (+3 points. To be eligible to answer the extra credit question your cell phone must not have rung during class or this test and you must have taken this test in class at the normally scheduled time)

What two events occurred in the 1890s made it possible for national brewers to exist?

Discussion Questions (25 points total)

1. Complete the following table for the short-run cost curves for the production function:  $Q = 3KL$  where in the short-run  $K$  is fixed at 2 units, with the rental price of capital = \$2 and the wage rate = \$3. (5 points)

Workers	Output	TC	VC	FC	ATC	AVC	AFC	MC
0					--	--	--	--
1								
2								

2. Assume that the soy bean market in the U.S. is perfectly competitive. The current market price (as of 7 February 2005) is \$5.01 per bushel (6 points)

a. Draw a graph of the soy bean market that reflects the current price per bushel (label all curves & axes!)

b. Sam Shelton is a soy bean farmer from Winterville. Given the above information, show that his profit maximizing output (in the short-run) is to grow 1,000 bushels of soy beans this year.

c. Given the information from (a & b) and the fact that Sam Shelton expects to lose \$2,000 this year yet he (correctly) decides to remain open. Show this information on a graph below:

3. The top five brewers comprised 19% of all U.S. sales in 1947 and 87.2% of all sales in 2001. Explain the reasons for the decline in the number of brewers. Use a graph to support your answer. (7 points)

4. In class we discussed 6 assumptions required for a market to be considered “perfectly competition” (7 pts).
  - a. List 5 of the 6 assumptions.
  - b. For each assumption indicate whether the U.S. beer industry meets the perfect competition requirement.
  - c. Supporting evidence: write a sentence or two to support/explain your answer in (b).

Answer Key:

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