Test 3 - Econ 3144
Fall 2010 - Dr. Rupp
31 Multiple Choice Questions

Name $\qquad$
Signature
"I have neither given nor received aid on this exam"

Use the following information to answer questions 1-4. A DVD making monopolist incurs $\$ 10$ in fixed costs. The marginal cost is $\$ 3$ per DVD produced.

| P | Q | TR | MR | TC | Profit |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $\$ 10$ | 0 |  |  |  |  |
| 9 | 1 |  |  |  |  |
| 8 | 2 |  |  |  |  |
| 7 | 3 |  |  |  |  |
| 6 | 4 |  |  |  |  |
| 5 | 5 |  |  |  |  |
| 4 | 6 |  |  |  |  |

1. What is the profit maximizing quantity for this DVD monopolist in the short run?
A) 0 (since closed in short run)
B) 5
C) 2
D) 1
E) 4
2. What is the profit maximizing quantity for this DVD monopolist in the long run?
A) 0 (since closed in long run)
B) 5
C) 2
D) 1
E) 4
3. How much profit (or loss) does this monopolist incur in the short run?
A) $\$ 0$
B) $\$ 2$
C) $-\$ 10$
D) $\$ 12$
E) $\$ 14$
4. How much profit (or loss) does this monopolist incur in the long run?
A) $\$ 0$
B) $\$ 4$
C) $\$ 2$
D) $\$ 12$
E) $\$ 14$
5. In the long-run, how does a monopolist determine whether to be open or closed?
A. Close if cannot cover all fixed costs
B. Close if price exceeds marginal costs
C. Close if earning zero economic profit
D. Close if losing money
E. Close if price exceeds average variable costs
6. Which of the following companies is an example of perfect price discrimination?
A. Carmike12
B. Shoe Carnival
C. eBay
D. US Airways
E. Domino's Pizza

The monopoly has the following inverted demand curve: $Q^{d}=100-2$ P. Graph the demand curve below.
P
7. Find the slope of slope of the above demand curve.
A. -2
B. $-1 / 2$
C. $-1 / 4$
D. -4
E. -1
8. What is the equation for MR for this monopolist?
A. $M R=100-4 \mathrm{P}$
B. $\mathrm{MR}=50-1 / 2 \mathrm{Q}$
C. $M R=4 Q$
D. $M R=100-2 P$
E. $M R=50-Q$

Use the following information to answer questions \#9-11:
A monopoly has a demand curve of $P=96-4 Q$, total cost: $T C=10+2 Q^{2}$ and marginal cost: $M C=4 Q$.
9. Find the profit maximizing quantity in the short-run:
A. $\mathrm{Q}=8$
B. $\mathrm{Q}=12$
C. $\mathrm{Q}=24$
D. $\mathrm{Q}=16$
E. $\mathrm{Q}=0$ (since firm is closed in short-run)
10. Find the profit maximizing price in the short-run:
A. $\mathrm{P}=\$ 8$
B. $\mathrm{P}=\$ 32$
C. $P=\$ 64$
D. $\mathrm{P}=\$ 80$
E. $\mathrm{P}=\$ 0$ (since firm is closed in short-run)
11. Find the profit.
A. $\$ 512$
B. $\$ 278$
C. $\$ 138$
D. \$374
E. - $\$ 10$ (since firm is closed in short-run)
12. Shelia open's an ice cream store in Greenville. Assume that ice cream business in Greenville is perfectly competitive. The price of ice cream is $\$ 2$ per scoop. $T C=0.1 q^{2}$ and $\mathrm{MC}=0.2 \mathrm{q}$. How many scoops of ice cream should Shelia sell?
A. $q=8$
B. $q=20$
C. $\mathrm{q}=12$
D. $\mathrm{q}=10$
E. $\mathrm{q}=1$
13. (Use the information from the previous question) How much profit (or loss) will Shelia incur?
A. \$1.90
B. \$20
C. \$10
D. \$0
E. (-\$10)

Given the market demand in the perfectly competitive industry is: $\mathrm{P}=100-2 \mathrm{Q}$ and the market supply is: $\mathrm{MC}=10+\mathrm{Q}$, use the graph below to answer the next three questions:

P
14. How much is consumer surplus?
A. 900
B. 450
C. 1200
D. 1350
E. 576
15. How much is producer surplus?
A. 900
B. 450
C. 1200
D. 1350
E. 576
16. How much is deadweight loss?
A. 900
B. 450
C. 1200
D. 1350
E. 0
17. Suppose there are 10 identical firms in the competitive cotton industry. The short-run marginal cost curve for the $i^{\text {th }}$ firm is given by: SMC $=2+4 q_{\mathrm{i}}$. Find the market supply curve:
A. $\mathrm{MC}=2+40 \mathrm{Q}_{\mathrm{mkt}}$
B. $\mathrm{MC}=20+4 \mathrm{Q}_{\mathrm{mkt}}$
C. $\mathrm{MC}=20+2 / 5 \mathrm{Q}_{\mathrm{mkt}}$
D. $\mathrm{MC}=2+2 / 5 \mathrm{Q}_{\mathrm{mkt}}$
E. $M C=2+5 / 2 \mathrm{Q}_{\mathrm{mkt}}$
18. Which curve acts as a perfectly competitive firm's supply curve?
A. MR
B. MC
C. ATC
D. AVC
E. AFC
19. What is the term "producer surplus" mean?
A. the gain to the firm from paying fixed costs in the short-run.
B. the dollar value of a firm's profits.
C. the dollar value accrued to the firm from producing the profit maximizing output ignoring fixed cost.
D. the additional marginal revenue following a price increase.
E. the increase in total surplus when a monopoly operates rather than a perfectly competitive firm.
20. Which of the following firms is an example of a $2^{\text {nd }}$ degree price discrimination?
A. Carmike12
B. Shoe Carnival
C. eBay
D. Marriott
E. Domino's Pizza
21. What output rule does the perfectly competitive firm and the monopolist use to maximize profits?
A. $\mathrm{P}=\mathrm{MR}$
B. $\mathrm{P}=\mathrm{ATC}$
C. $\mathrm{MC}=\mathrm{MR}$
D. $\mathrm{MC}=\mathrm{AVC}$
E. P = AVC
22. What does it mean if a company perfectly price discriminates?
A. it offers a different price for parents than for kids since kids have less money.
B. it offers a lower price if people are willing to clip coupons
C. if offers an infinite number of different prices based on willingness to pay
D. it offers a lower price to those who are willing to buy larger quantities
E. it is a measure of firms profits.
23. A perfectly price discriminating monopolist has demand: $\mathrm{P}=100-3 \mathrm{Q}$ and marginal cost: $\mathrm{MC}=2 \mathrm{Q}$. How much output does the perfectly price discriminating monopolist produce?
A. 12.5
B. 9.09
C. 20
D. 15
E. 18
24. How much is consumer surplus for the perfectly price discriminating monopolist?
A. 0
B. 600
C. 400
D. 1000
E. 500

Use the following information to answer the questions 25-30:
A monopoly has demand curve $\mathrm{P}=100-\mathrm{Q}$ and $\mathrm{TC}=10 \mathrm{Q}$ and $\mathrm{MC}=10$
25 . Find the profit maximizing quantity in the long-run:
A. $\mathrm{Q}=0$ (since closed in long-run)
B. $\mathrm{Q}=10$
C. $\mathrm{Q}=90$
D. $\mathrm{Q}=50$
E. $\mathrm{Q}=45$
26. Find the profit maximizing price in the long-run
A. $\mathrm{P}=\$ 0$ (since closed in long-run)
B. $\mathrm{P}=\$ 55$
C. $\mathrm{P}=\$ 50$
D. $\mathrm{P}=\$ 10$
E. $P=\$ 90$
27. Find the profit
A. \$2025
B. $\$ 2475$
C. $\$ 2000$
D. \$2500
E. $\$ 800$
28. Find the consumer surplus
A. \$0
B. $\$ 1012.50$
C. \$1250
D. $\$ 50$
E. $\$ 750$
29. Find the producer surplus
A. $\$ 100$
B. $\$ 1500$
C. $\$ 2500$
D. \$2025
E. \$0
30. Find the deadweight loss
A. \$0
B. $\$ 50$
C. $\$ 250$
D. $\$ 1250$
E. \$1012.50

Extra Credit: Only if you are taking the test at the regularly scheduled day and time and your cell phone has not rung in class since the last test.
31. If price is $\$ 18$ and the monopolist if producing $\mathrm{Q}=8$, the $\mathrm{ATC}=\$ 8, \mathrm{AVC}=\$ 6, \mathrm{MR}=\$ 12$, and $\mathrm{MC}=$ $\$ 14$. How can this monopolist increase profits?
A. increase quantity
B. reduce quantity
C. keep quantity unchanged since already maximizing profits
D. shut down since losing money in long-run.
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