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| Regulation & Antitrust Policy (Econ 180) | Signature: |  |
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**QUIZ #7 VERSION A**

**"Horizontal Mergers"**

INSTRUCTIONS: This exam is closed-book, closed-notes. Simple calculators are permitted, but graphing calculators or calculators with alphabetical keyboards are NOT permitted. Mobile phones or other wireless devices are NOT permitted. Points will be subtracted for illegible writing or incorrect rounding. Point values for each question are noted in brackets.

**I. Multiple choice:**  Circle the one best answer to each question. [2 pts each: 14 pts total]

(1) The U.S. Supreme Court used inconsistent definitions of markets in the

1. *ALCOA* (1964) and *Continental Can* (1964) cases.
2. *Bethlehem Steel* (1958) and *Procter and Gamble-Clorox* case (1967).
3. *Brown Shoe* (1962) and *Von's Grocery* (1966) cases.

(2) The U.S. Supreme Court showed a concern for potential competition in the

1. *ALCOA* (1964) and *Continental Can* (1964) cases.
2. *Bethlehem Steel* (1958) and *Procter and Gamble-Clorox* case (1967).
3. *Brown Shoe* (1962) and *Von's Grocery* (1966) cases.

(3) The U.S. Supreme Court showed a willingness to stop mergers involving even small market shares in the

1. *ALCOA* (1964) and *Continental Can* (1964) cases.
2. *Bethlehem Steel* (1958) and *Procter and Gamble-Clorox* case (1967).
3. *Brown Shoe* (1962) and *Von's Grocery* (1966) cases.

(4) According to the DOJ-FTC *Horizontal Merger Guidelines*, the ability of a hypothetical monopolist to impose a "small but significant and nontransitory increase in price” should be used to

1. compute a merged firm’s Lerner index.
2. define the extent of a market.
3. decide whether a merger should be opposed.
4. compare with any cost savings.
5. regulate price in a market.
6. distinguish vertical, horizontal, and conglomerate mergers.

(5) Typically, if the definition of the market is broadened to include more products believed to be close substitutes, then

1. the Hirschman-Herfindahl index (HHI) will increase.
2. the HHI will decrease.
3. The HHI is not usually affected by market definition.

(6) In the 1997 proposed merger of Staples and Office Depot, the government argued that

1. only cost savings should be considered.
2. the merger was acceptable.
3. the effect of the merger on cost savings and market price should be weighed using the compensation test.
4. only the effect of the merger on market price should be considered.

(7) According to the DOJ-FTC *Non-Horizontal Merger Guidelines*, a conglomerate merger for market extension or product extension may be challenged if the acquired firm’s market is highly concentrated and the merger

1. raises the probability of collusion across firms.
2. raises costs of the acquired firm.
3. increases concentration further.
4. eliminates potential competition.
5. any of the above.

**II. Problems:** Insert your answer to each question below in the box provided. Use margins and graphs for scratch work⎯only the answers in the boxes will be graded. Work carefully⎯partial credit is not normally given for questions in this section.

(1) [Types of mergers: 8 pts] Consider the following 5 types of mergers.

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| * *horizontal merger.*
* *vertical merger.*
* *conglomerate merger for product extension.*
 | * *conglomerate merger for market extension.*
* *pure conglomerate merger.*
 |

For each merger description below, insert the correct type of merger

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| a. A restaurant chain operating in the Northeast merges with a restaurant chain operating in the Midwest. |  |
| b. An automobile manufacturer merges with another automobile manufacturer. |  |
| c. A baked-goods company merges with a car-rental company. |  |
| d. A company that makes computers merges with a company that makes memory chips for computers. |  |

(2) [Statutes: 15 pts] Consider the following six statutes:

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| * *Celler-Kefauver Act*
* *Clayton Act, Section 7*
* *Federal Trade Commission Act*
 | * *Hart-Scott-Rodino Act*
* *Sherman Act, Section 1*
* *Sherman Act, Section 2.*
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For each description or quote below, write the appropriate statute.

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| a. "Every person who shall monopolize, or attempt to monopolize, or combine or conspire with any other person or persons, to monopolize any part of the trade or commerce among the several States, or with foreign nations, shall be deemed guilty of a felony…" |  |
| b. Prohibits merger by acquiring the *stock* of a rival corporation, where the effect is to lessen competition. |  |
| c. Prohibits merger by acquiring the *assets* of a rival corporation, where the effect is to lessen competition. |  |
| d. Requires prior notification of mergers to the Federal Trade Commission and the Antitrust Division of the Department of Justice. |  |
| e. "Every contract, combination in the form of trust or otherwise, or conspiracy, in restraint of trade or commerce among the several States, or with foreign nations, is declared to be illegal." |  |

(3) [HHI and merger guidelines: 18 pts] Suppose the market shares in an industry are as follows.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Firm | #1 | #2 | #3 | #4 | #5 | #6 | #7 |
| Market share | 30% | 20% | 20% | 10% | 10% | 8% | 2% |

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| a. Compute the current value of the Hirschman-Herfindahl index. |  |
| b. Under the DOJ-FTC *Horizontal Merger Guidelines*, would this industry be classified as “unconcentrated,” “moderately concentrated,” or “highly concentrated”? |  |

Now suppose Firm #6 were to merge with Firm #7.

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| c. Compute the postmerger value of the Hirschman-Herfindahl index. |  |
| d. Under the DOJ-FTC *Horizontal Merger Guidelines*, would this industry now be classified as “unconcentrated,” “moderately concentrated,” or “highly concentrated”? |  |
| e. On the basis of these concentration calculations alone, would the government likely oppose this merger, according to the *Guidelines*? (Answer yes or no.) |  |
| f. Why or why not? |  |
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(4) [Welfare tradeoffs of mergers: 36 pts] Consider the industry depicted in the graph below.

Assume this industry is currently competitive and that all firms have the same average cost (AC) and marginal cost (MC) shown above as the “premerger” value.

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| a. What is the competitive equilibrium price? | $ |
| b. What is the competitive equilibrium quantity? |  thousand |

Suppose a proposed merger would have two effects. First, it would change the industry to a monopoly. Second, it would reduce AC and MC to the “postmerger” value shown above due to economies of scale and rationalization of production.

 c. *Using a straightedge*, draw the marginal revenue curve of the monopoly and label it.

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| d. What price would the monopoly charge? | $ |
| e. What quantity would the monopoly produce? |  thousand |
| f. Compute the monopoly's Lerner index (or price-cost margin). |  |
| g. Compute the loss of consumer surplus as the price rises from the premerger competitive value to the postmerger monopoly value. | $ thousand |
| h. How much of this loss is a transfer to the monopoly producer? | $ thousand |
| i. Compute the deadweight loss as a result of monopoly pricing (without considering cost savings). | $ thousand |
| j. Compute the cost savings in producing the monopoly level of output as a result of the merger. | $ thousand |
| k. Does net social welfare *increase or decrease* as a result of the merger? |  |
| l. By how much? | $ thousand |

**III. Challenge question** [9 pts]

Company X produces appliances. Its total cost depends on output levels according to the following table.

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| Total cost | Zero refrigerators | 100 refrigerators | 200 refrigerators |
| Zero washing machines | $0 | $50,000 | $120,000 |
| 50 washing machines | $12,000 | $58,000 | $129,000 |
| 100 washing machines | $20,000 | $65,000 | $135,000 |

1. Does Company X appear to enjoy economies of scale in producing refrigerators? Why or why not?
2. Does Company X appear to enjoy economies of scale in producing washing machines? Why or why not?
3. Does Company X appear to enjoy economies of scope? Why or why not?

[end of quiz]