Chapter 13: STRATEGIC DECISION MAKING IN OLIGOPOLY MARKETS

Multiple Choice

13-1 What is the most important characteristic of oligopoly?
   a. firms have market power
   b. product differentiation
   c. low barriers to entry
   d. interdependence of profits
   e. none of the above
   Answer: d
   Difficulty: 01 Easy
   Topic: Decision Making When Rivals Make Simultaneous Decisions
   AACSB: Reflective Thinking
   Blooms: Remember
   Learning Objective: 13-01

13-2 In an oligopoly market,
   a. a firm must lower price in order to sell more output.
   b. each firm faces a demand curve that depends on how the firm’s rivals behave.
   c. a few firms account for a large portion of industry sales.
   d. both a and b
   e. all of the above
   Answer: e
   Difficulty: 01 Easy
   Topic: Decision Making When Rivals Make Simultaneous Decisions
   AACSB: Reflective Thinking
   Blooms: Remember
   Learning Objective: 13-01

13-3 Oligopolists face interdependent profits because
   a. there are few firms in the market.
   b. the product is differentiated.
   c. industry sales are large.
   d. all of the above
   Answer: a
   Difficulty: 01 Easy
   Topic: Decision Making When Rivals Make Simultaneous Decisions
   AACSB: Reflective Thinking
   Blooms: Remember
   Learning Objective: 13-01

13-4 Actions taken by oligopolists to plan for and react to actions of rival firms represent
   a. strategic behavior.
   b. interdependence.
   c. cooperative behavior.
   d. game theory.
   e. all of the above.
   Answer: a
In game theory, a dominant strategy is
a. a strategy used by a large firm to compete against smaller firms.
  
b. a strategy followed by the price leader.
  
c. a strategy involving a high risk but also a high return.
  
d. a strategy that leads to the best outcome no matter what a rival does.
  
e. none of the above
Answer: d

In game theory, a dominant strategy is
a. a strategy that leads to the best possible outcome for both firms.
  
b. any strategy that leads to a Nash equilibrium.
  
c. a strategy that yields a minimax outcome.
  
d. a strategy that leads to the best outcome for a firm no matter what strategy the other
  chooses.
  
e. none of the above
Answer: d

When participants in a game choose to take actions that result in a Nash equilibrium,

a. no single participant has an incentive to change its action.
  
b. each participant has chosen the best action possible, given what the others have chosen.
  
c. no other set of actions could make ALL participants better off.
  
d. both a and b
  
e. all of the above
Answer: d

Interdependence occurs when

a. firms consider the actions of other firms when making price and output decisions.
  
b. all firms in an industry are affected by the same general economic conditions, like
  consumer incomes and the unemployment rate.
  
c. firms cooperate to increase profit.
13-9 Which of the following is an example of strategic entry deterrence?
   a. price reductions
   b. building excess capacity
   c. economies of scale
   d. both b and c
   e. both a and b
Answer: b

13-10 In a duopoly situation with two firms A and B, A's best-response curve
   a. gives A's profit-maximizing price given B's anticipated price.
   b. gives A's minimax solution.
   c. is derived based upon the underlying interdependence of firms A and B.
   d. both a and c
   e. all of the above
Answer: d

13-11 A form of strategic entry deterrence is
   a. forming a cartel.
   b. maintaining excess capacity.
   c. limit pricing.
   d. both b and c
   e. all of the above
Answer: d
13-12 One reason a firm or firms might charge a price lower than its profit-maximizing price is
a. to discourage the entry of new firms.
b. to follow a tit-for-tat strategy.
c. to erect multiproduct barriers to entry.
d. both a and c
e. all of the above
Answer: a
Difficulty: 01 Easy
Topic: Strategic Entry Deterrence
AACSB: Reflective Thinking
Blooms: Understand
Learning Objective: 13-04

13-13 Refer to the following figure showing the reaction functions of oligopoly firms A and B.

If firm B expects firm A will run 2 ads, then firm B should run _____ ads in order to maximize its own profit.
a. 1
b. 3
c. 5
d. 6
e. 7
Answer: d
Difficulty: 01 Easy
Topic: Decision Making When Rivals Make Simultaneous Decisions
AACSB: Analytic
Blooms: Apply
Learning Objective: 13-01
13-14 Refer to the following figure showing the reaction functions of oligopoly firms A and B.

If firm A anticipates that firm B will run 3 ads, then firm A should run _____ ads in order to maximize its own profit.

a. 1  
b. 2  
c. 4  
d. 5  
e. 6.5  
Answer: b  
Difficulty: 01 Easy  
Topic: Decision Making When Rivals Make Simultaneous Decisions  
AACSB: Analytic  
Blooms: Apply  
Learning Objective: 13-01

13-15 Refer to the following figure showing the reaction functions of oligopoly firms A and B.
In Nash equilibrium,

a. firm A runs 4 ads and firm B runs 7 ads.

b. firm A runs 7 ads and firm B runs 4 ads.

c. firm A runs 2 ads and firm B runs 2 ads.

d. firm A runs 3 ads and firm B runs 5 ads.

e. none of the above.

Answer: a

Difficulty: 02 Medium

Topic: Decision Making When Rivals Make Simultaneous Decisions

AACSB: Analytic

Blooms: Apply

Learning Objective: 13-01

13-16 Refer to the following figure showing the reaction functions of oligopoly firms A and B.

In Nash equilibrium,

a. both firms are maximizing their own profits given the level of advertising expected to be undertaken by the other firm.

b. firm A can increase its profit by unilaterally increasing its level of advertising.

c. firm B can increase its profit by unilaterally increasing its level of advertising.

d. both b and c.

e. all of the above.

Answer: a

Difficulty: 01 Easy

Topic: Decision Making When Rivals Make Simultaneous Decisions

AACSB: Analytic

Blooms: Apply

Learning Objective: 13-01
Refer to the following figure. Two firms, A and B, produce similar, but not identical, products. \( BR_A \) and \( BR_B \) are, respectively, the reaction functions for firms A and B, which compete primarily by price.

A’s best-response curve shows

a. all the Nash equilibrium prices that firm A can charge.

b. how firm B should react to any price set by A.

c. the price A should charge to maximize A’s profits given each possible price that B might charge.

d. the price A should charge to maximize joint profits.

e. both c and d

Answer: c

Difficulty: 01 Easy

Topic: Decision Making When Rivals Make Simultaneous Decisions

AACSB: Reflective Thinking

Blooms: Understand

Learning Objective: 13-01
Refer to the following figure. Two firms, A and B, produce similar, but not identical, products. $BR_A$ and $BR_B$ are, respectively, the reaction functions for firms A and B, which compete primarily by price.

If firm A is expected to charge a price of $6, B should charge a price of $_____ to maximize B’s profit.

a. $4  
b. $7  
c. $12  
d. $16

Answer: c

Difficulty: 01 Easy
Topic: Decision Making When Rivals Make Simultaneous Decisions
AACSB: Reflective Thinking
Blooms: Understand
Learning Objective: 13-01
If firm A predicts B will set a price of $12, then firm A should charge a price of $______ to maximize A’s profit.

a. $6  
b. $8  
c. $10  
d. $12  
Answer: c  
Difficulty: 01 Easy  
Topic: Decision Making When Rivals Make Simultaneous Decisions  
AACSB: Reflective Thinking  
Blooms: Understand  
Learning Objective: 13-01

13-20 Refer to the following figure. Two firms, A and B, produce similar, but not identical, products.  
\( BR_A \) and \( BR_B \) are, respectively, the reaction functions for firms A and B, which compete primarily by price.
In Nash equilibrium,
a. each firm has an incentive to increase price unilaterally.
b. the two firms are maximizing joint profit.
c. firm A charges $12 and firm B charges $16.
d. each firm is maximizing its profit, given what the other is doing.
e. both c and d
Answer: e
Difficulty: 02 Medium
Topic: Decision Making When Rivals Make Simultaneous Decisions
AACSB: Analytic
Blooms: Apply
Learning Objective: 13-01

13-21 Profits are interdependent in oligopoly markets because
a. products are differentiated.
b. managers are trying to set prices cooperatively in order to maximize total industry profit.
c. entry into the market is not restricted by some form of entry barrier.
d. each firm in the market is relatively large.
e. all of the above
Answer: d
Difficulty: 02 Medium
Topic: Decision Making When Rivals Make Simultaneous Decisions
AACSB: Reflective Thinking
Blooms: Understand
Learning Objective: 13-01

13-22 Which of the following is not evidence of oligopoly interdependence?:
a. strategic behavior
b. the need to get into the heads of rival managers
c. making decisions that result in the equating of marginal revenue and marginal cost
d. thinking ahead in sequential decisions to anticipate rivals’ future actions
Answer: c
At the point of intersection of two best-response curves, each manager is
a. unable to achieve a higher payoff through any unilateral change of strategy.
b. doing its part to reach a Nash equilibrium.
c. total industry profit is maximized.
d. each firm is making the greatest possible individual profit.
e. both a and b.
Answer: e

Use the following payoff table for Hardaway Corporation and Paxton Industries. These two firms must make simultaneous pricing decisions. They can choose low, medium, or high prices.

<table>
<thead>
<tr>
<th></th>
<th>Low</th>
<th>Medium</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Low</strong></td>
<td>A $30, $30</td>
<td>B $45, $20</td>
<td>C $32, $20</td>
</tr>
<tr>
<td><strong>Medium</strong></td>
<td>D $20, $45</td>
<td>E $40, $40</td>
<td>F $45, $35</td>
</tr>
<tr>
<td><strong>High</strong></td>
<td>G $15, $48</td>
<td>H $38, $52</td>
<td>I $50, $50</td>
</tr>
</tbody>
</table>

Payoffs in thousands of dollars of monthly profits.

Following the procedure of successive elimination of dominated strategies, the manager of Hardaway Corporation will eliminate in the first round the strategy of setting
a. a low price.
b. a medium price.
c. a high price.
d. None of the above; Hardaway does not have a dominated strategy.
Answer: b
Use the following payoff table for Hardaway Corporation and Paxton Industries. These two firms must make simultaneous pricing decisions. They can choose low, medium, or high prices.

### Paxton Industries

<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td><strong>A</strong></td>
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<td><strong>B</strong></td>
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Payoffs in thousands of dollars of monthly profits.

Following the procedure of successive elimination of dominated strategies, the manager of Paxton Industries will eliminate in the first round the strategy of setting

a. a low price.

b. a medium price.

c. a high price.

d. None of the above; Paxton Industries does not have a dominated strategy.

Answer: **c**

Difficulty: 02 Medium

Topic: Decision Making When Rivals Make Simultaneous Decisions

AACSB: Analytic

Blooms: Apply

Learning Objective: 13-01

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Use the following payoff table for Hardaway Corporation and Paxton Industries. These two firms must make simultaneous pricing decisions. They can choose low, medium, or high prices.

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Payoffs in thousands of dollars of monthly profits.

After the first round of eliminating dominated strategies for both firms,

a. Hardaway Corporation has a dominant strategy, which is to price low.

b. Hardaway Corporation has a dominant strategy, which is to price medium.

c. Paxton Industries has a dominant strategy, which is to price low.

d. Paxton Industries has a dominant strategy, which is to price medium.

e. both b and d.

Answer: **a**

Difficulty: 03 Hard

Topic: Decision Making When Rivals Make Simultaneous Decisions

AACSB: Analytic

Blooms: Apply
Learning Objective: 13-01

13-27 Use the following payoff table for Hardaway Corporation and Paxton Industries. These two firms must make simultaneous pricing decisions. They can choose low, medium, or high prices.

<table>
<thead>
<tr>
<th></th>
<th>Low</th>
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<tbody>
<tr>
<td><strong>Low</strong></td>
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<td><strong>Hardaway Corp.</strong></td>
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Payoffs in thousands of dollars of monthly profits.

After the first round of eliminating dominated strategies for both firms,

a. no more dominated strategies remain for further elimination.
b. setting a medium price for Hardaway Corporation can next be eliminated in a second round.
c. setting a high price for Hardaway Corporation can next be eliminated in a second round.
d. no other dominated strategies can be eliminated for Paxton Industries.
e. both c and d.

Answer: e

Difficulty: 03 Hard
Topic: Decision Making When Rivals Make Simultaneous Decisions
AACSB: Analytic
Blooms: Apply
Learning Objective: 13-01

13-28 Use the following payoff table for Hardaway Corporation and Paxton Industries. These two firms must make simultaneous pricing decisions. They can choose low, medium, or high prices.

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</tr>
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Payoffs in thousands of dollars of monthly profits.

For the simultaneous pricing decision facing Hardaway Corporation and Paxton Industries,

a. cell I is a strategically stable pricing outcome.
b. cell A is the likely outcome of the pricing decision.
c. cell E is the equilibrium pricing decision.
d. both firms pricing low is a Nash equilibrium.
e. both b and d.

Answer: e

Difficulty: 03 Hard
13-29 A second-mover advantage
a. exists when a firm can earn greater profit by reacting to earlier decisions made by rivals.
b. always arises when there is not a first-mover advantage in a sequential decision.
c. arises because rivals have imperfect information about payoffs.
d. none of the above
Answer: a
Difficulty: 01 Easy

Topic: Decision Making When Rivals Make Simultaneous Decisions
AACSB: Analytic
Blooms: Apply
Learning Objective: 13-01

13-30 Two men’s clothing stores that compete for most of the market in a small town in Ohio must choose their advertising levels simultaneously. The following payoff table facing the two firms, Arbuckle & Son and Mr. B’s, shows the weekly profit outcomes for the various advertising level combinations.

<table>
<thead>
<tr>
<th>Mr. B’s advertising level</th>
<th>High</th>
<th>Low</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>A: $4,000, $4,000</td>
<td>B: $3,000, $5,000</td>
</tr>
<tr>
<td>Low</td>
<td>C: $5,000, $3,000</td>
<td>D: $3,500, $3,500</td>
</tr>
</tbody>
</table>

Arbuckle and Son
a. has a dominant strategy: choose a high level of advertising.
b. has a dominant strategy: choose a low level of advertising.
c. has a dominated strategy: choose a high level of advertising.
d. has a dominated strategy: choose a low level of advertising.
e. both b and c.
Answer: e
Difficulty: 02 Medium
Topic: Decision Making When Rivals Make Simultaneous Decisions
AACSB: Analytic
Blooms: Apply
Learning Objective: 13-01

13-31 Two men’s clothing stores that compete for most of the market in a small town in Ohio must choose their advertising levels simultaneously. The following payoff table facing the two firms, Arbuckle & Son and Mr. B’s, shows the weekly profit outcomes for the various advertising decision combinations.

<table>
<thead>
<tr>
<th>Mr. B’s advertising level</th>
<th>High</th>
<th>Low</th>
</tr>
</thead>
</table>

Chapter 13: STRATEGIC DECISION MAKING IN OLIGOPOLY MARKETS
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Mr. B’s
a. has a dominant strategy: choose a high level of advertising.
b. has a dominant strategy: choose a low level of advertising.
c. has a dominated strategy: choose a low level of advertising.
d. has no dominated strategy
e. both a and c.
Answer: b

Difficulty: 02 Medium
Topic: Decision Making When Rivals Make Simultaneous Decisions
AACSB: Analytic
Blooms: Apply
Learning Objective: 13-01

13-32 Two men’s clothing stores that compete for most of the market in a small town in Ohio must choose their advertising levels simultaneously. The following payoff table facing the two firms, Arbuckle & Son and Mr. B’s, shows the weekly profit outcomes for the various advertising level combinations.

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</tr>
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<tbody>
<tr>
<td><strong>Arbuckle &amp; Son advertising level</strong></td>
<td><strong>Mr. B’s advertising level</strong></td>
<td><strong>Mr. B’s advertising level</strong></td>
</tr>
<tr>
<td>High</td>
<td>A: $4,000, $4,000</td>
<td>B: $3,000, $5,000</td>
</tr>
<tr>
<td>Low</td>
<td>C: $5,000, $3,000</td>
<td>D: $3,500, $3,500</td>
</tr>
</tbody>
</table>

Which of the following statements is NOT true for the advertising decision facing Arbuckle & Son and Mr. B?

a. When both firms choose a high level of advertising, they are in Nash equilibrium.
b. When both firm choose a low level of advertising, they are in Nash equilibrium.
c. This is a prisoners’ dilemma decision situation.
d. Cell’s B and C are not strategically stable.
e. A dominant strategy equilibrium exists for Arbuckle and Mr. B.

Answer: a

Difficulty: 02 Medium
Topic: Decision Making When Rivals Make Simultaneous Decisions
AACSB: Analytic
Blooms: Apply
Learning Objective: 13-01

13-33 A credible commitment is

a. always irreversible.
b. a way of becoming the first-mover in sequential decision situation.
c. an unconditional strategic move.
d. both a and c
e. all of the above

Answer: b

Chapter 13: STRATEGIC DECISION MAKING IN OligopolY MARKETS
13-34 A conditional strategic move, such as a threat or promise, can be credible only if
a. rivals believe the manager making the threat or promise can be trusted to follow through on any commitment, threat, or promise that he or she makes.
b. the strategic move harms rivals.
c. it can increase each firm’s payoff.
d. when the time comes to carry out the threat or promise, fulfilling the threat or promise is in the best interest of the firm making the threat or promise.
e. none of the above.
Answer: d

13-35 If incumbent firm Dell threatens potential new entrant Rising Star with the threat, “If you enter this market, we will lower our price and keep it low until you are driven out of the market,” then
a. Rising Star would never go ahead and enter if Dell has a cost advantage over Rising Star.
b. Rising Star’s decision to enter will be unaffected by the threat if the threat is not credible.
c. Dell is making a strategic move designed to increase its profits at the expense of Rising Star.
d. both b and c.
e. all of the above
Answer: d

13-36 In sequential decision making situations, using the roll-back method
a. results in a Nash equilibrium.
b. allows the decision maker going second to predict what the decision maker going first will do.
c. allows predictions about what the decision maker going second will do to be used by the decision maker going first.
d. both a and b
e. both a and c
Answer: e
13-37  In simultaneous decision making situations, common knowledge means that
   a. at least one of the decision makers knows what is going to happen.
   b. all of the decision makers know what the outcome of the decision will be.
   c. even people not involved in making the decision will be able predict the outcome.
   d. the managers of the firms failed to keep all of the information about their decision plans secret.
   e. none of the above
   Answer: e
   Difficulty: 02 Medium
   Topic: Strategy When Rivals Make Sequential Decisions
   AACSB: Reflective Thinking
   Blooms: Remember
   Learning Objective: 13-02

13-38  Firms make credible commitments by taking _________________, ______________ actions.
   a. irreversible, unconditional
   b. reversible, uncontrollable
   c. reversible, believable
   d. costly, but believable
   e. costly, reversible
   Answer: a
   Difficulty: 02 Medium
   Topic: Strategy When Rivals Make Sequential Decisions
   AACSB: Reflective Thinking
   Blooms: Remember
   Learning Objective: 13-02

13-39  Two men’s clothing stores that compete for most of the market in a small town in Ohio and will
   choose their weekly advertising levels sequentially. The newspaper advertising department calls
   the clothing stores in alphabetical order to find out how much advertising each firm wishes to buy.
   Somehow — and nobody at the newspaper knows exactly how this happens — Arbuckle’s
   advertising decision “leaks out” to Mr. B’s, which then knows Arbuckle’s advertising decision
   when it makes its advertising decision for the week.

   The following payoff table facing the two firms, Arbuckle & Son and Mr. B’s, shows the weekly
   profit outcomes for the various advertising decision combinations. The payoff table is common
   knowledge. Use this payoff table to construct the appropriate sequential decision on the blank
   game tree provided below.

<table>
<thead>
<tr>
<th>Mr. B’s advertising level</th>
<th>High</th>
<th>Low</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>A: $4,000, $4,000</td>
<td>B: $3,000, $5,000</td>
</tr>
<tr>
<td>Low</td>
<td>C: $5,000, $3,000</td>
<td>D: $3,500, $3,500</td>
</tr>
</tbody>
</table>

Chapter 13: STRATEGIC DECISION MAKING IN OLIGOPOLY MARKETS
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When Arbuckle and Son makes its advertising decision first,

a. it need not consider what Mr. B’s advertising decision will be since Arbuckle and Son cannot know what decision Mr. B will make.

b. the common knowledge that both managers have about the payoff table insures that Arbuckle will earn $5,000 of weekly profit.

c. it should use the roll-back method to insure that it will earn $5,000 of weekly profit.

d. all of the above.

e. none of the above

Answer: e

Difficulty: 03 Hard

Topic: Strategy When Rivals Make Sequential Decisions

AACSB: Analytic

Blooms: Apply

Learning Objective: 13-02
Two men’s clothing stores that compete for most of the market in a small town in Ohio and will choose their weekly advertising levels *sequentially*. The newspaper advertising department calls the clothing stores in alphabetical order to find out how much advertising each firm wishes to buy. Somehow — and nobody at the newspaper knows exactly how this happens — Arbuckle’s advertising decision “leaks out” to Mr. B’s, which then knows Arbuckle’s advertising decision when it makes its advertising decision for the week.

The following payoff table facing the two firms, Arbuckle & Son and Mr. B’s, shows the weekly profit outcomes for the various advertising decision combinations. The payoff table is common knowledge. Use this payoff table to construct the appropriate sequential decision on the blank game tree provided below.

If the manager at Arbuckle and Son employs the roll-back method to make the advertising decision for Arbuckle, the likely outcome will be $3,500 of weekly profit for Arbuckle and $3,500 of weekly profit for Mr. B’s.

a. $5,000 of weekly profit for Arbuckle and $5,000 of weekly profit for Mr. B’s.
b. $5,000 of weekly profit for Arbuckle and $3,000 of weekly profit for Mr. B’s.
c. $3,000 of weekly profit for Arbuckle and $5,000 of weekly profit for Mr. B’s.
d. $4,000 of weekly profit for Arbuckle and $4,000 of weekly profit for Mr. B’s.

Answer: a

Difficulty: 03 Hard

Topic: Strategy When Rivals Make Sequential Decisions

AACSB: Analytic

Blooms: Apply

Learning Objective: 13-02
Two men’s clothing stores that compete for most of the market in a small town in Ohio and will choose their weekly advertising levels *sequentially*. The newspaper advertising department calls the clothing stores in alphabetical order to find out how much advertising each firm wishes to buy. Somehow — and nobody at the newspaper knows exactly how this happens — Arbuckle’s advertising decision “leaks out” to Mr. B’s, which then knows Arbuckle’s advertising decision when it makes its advertising decision for the week.

The following payoff table facing the two firms, Arbuckle & Son and Mr. B’s, shows the weekly profit outcomes for the various advertising decision combinations. The payoff table is common knowledge. Use this payoff table to construct the appropriate sequential decision on the blank game tree provided below.

<table>
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<tr>
<th>Mr. B’s advertising level</th>
<th>High</th>
<th>Low</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>$4,000, 4,000</td>
<td>$3,000, 5,000</td>
</tr>
<tr>
<td>Low</td>
<td>$5,000, 3,000</td>
<td>$3,500, 3,500</td>
</tr>
</tbody>
</table>

By making its advertising decision after Arbuckle and Son, Mr. B’s

a. enjoys a first-mover advantage.
b. enjoys a second-mover advantage.
c. does not end up any better off than if it made its advertising decision first.d. can secure a $5,000 profit payoff for itself.e. both b and d.

Answer: c

Difficulty: 02 Medium
Topic: Strategy When Rivals Make Sequential Decisions
AACSB: Analytic
Blooms: Apply
Learning Objective: 13-02
13-42 Credible commitments give committing firms
a. the first moves in sequential games.
b. a second-mover advantage in sequential games.
c. a way to improve their payoffs.
d. both a and c
 e. both b and c
Answer: d
Difficulty: 02 Medium
Topic: Strategy When Rivals Make Sequential Decisions
AACSB: Reflective Thinking
Blooms: Understand
Learning Objective: 13-02

13-43 Which of the following are trigger strategies?
a. eye-for-an-eye
b. tit-for-tat
c. grim
d. both b and c
e. all of the above
Answer: d
Difficulty: 02 Medium
Topic: Strategy When Rivals Make Sequential Decisions
AACSB: Reflective Thinking
Blooms: Remember
Learning Objective: 13-02

13-44 Which strategy for punishing cheating has consistently been the winning strategy in tournaments pitting decision strategies against one another?
a. grim
b. eye-for-an-eye
c. tit-for-tat
d. Nash strategy
Answer: c
Difficulty: 01 Easy
Topic: Strategy When Rivals Make Sequential Decisions
AACSB: Reflective Thinking
Blooms: Remember
Learning Objective: 13-02

13-45 In every prisoners’ dilemma situation, cooperation
a. is possible.
b. reduces the payoff to at least one of the firms.
c. reduces the payoff to all players.
d. is likely.
e. both c and d.
Answer: a
Difficulty: 01 Easy
Topic: Cooperation in Repeated Strategic Decisions
AACSB: Reflective Thinking
Blooms: Remember
13-46 In a one-time prisoners’ dilemma decision,
   a. all firms expect the other firms to cheat.
   b. cheating is usually not a value-maximizing decision.
   c. cheating is less likely when the discount rate is low.
   d. cheating is less likely when the discount rate is high.
Answer: a
Difficulty: 01 Easy
Topic: Cooperation in Repeated Strategic Decisions
AACSB: Reflective Thinking
Blooms: Understand
Learning Objective: 13-03

13-47 In a prisoners’ dilemma decision that is made only one time,
   a. the Nash equilibrium is a non-cooperative outcome.
   b. a set of decisions exists that is better than the Nash decisions for each and every
      oligopoly firm.
   c. the discount rate is irrelevant for decision making.
   d. rivals have no way to punish cheaters.
   e. all of the above.
Answer: e
Difficulty: 02 Medium
Topic: Cooperation in Repeated Strategic Decisions
AACSB: Reflective Thinking
Blooms: Understand
Learning Objective: 13-03

13-48 In a repeated decision for which the present value of the benefits of cheating is less than the
    present value of the costs of cheating,
   a. deciding not to cheat is a value-maximizing decision.
   b. deciding to cooperate is a value-maximizing decision.
   c. deciding to cheat is a value-maximizing decision.
   d. both a and b
Answer: d
Difficulty: 02 Medium
Topic: Strategy When Rivals Make Sequential Decisions
AACSB: Reflective Thinking
Blooms: Understand
Learning Objective: 13-02

13-49 In a repeated decision for which the present value of the benefits of cheating is greater than the
    present value of the costs of cheating,
   a. deciding not to cheat is a value-maximizing decision.
   b. deciding to cooperate is a value-maximizing decision.
   c. deciding to cheat is a value-maximizing decision.
   d. both a and b
Answer: c
Difficulty: 01 Easy
Topic: Strategy When Rivals Make Sequential Decisions
AACSB: Reflective Thinking
Chapter 13: STRATEGIC DECISION MAKING IN OLIGOPOLY MARKETS

13-50 In the U.S., firms that engage in cooperative efforts to coordinate pricing
   a. are always in violation of antitrust laws.
   b. may face federal charges of illegal collusion if they cannot provide evidence that the
      coordination of prices was in the best interest of consumers.
   c. are simply trying to reach a Nash equilibrium and are not viewed by courts as necessarily
      breaking any laws.
   d. both b and c.
Answer: a
Difficulty: 02 Medium
Topic: Cooperation in Repeated Strategic Decisions
AACSB: Reflective Thinking
Blooms: Understand
Learning Objective: 13-03

13-51 In a repeated prisoners’ dilemma decision, both managers can make credible threats to punish
   cheating because
   a. if either manager cheats, the other manager can increase its profit by also cheating.
   b. both of the cheating cells in the payoff table are strategically stable cells.
   c. when both firms cheat, they both avoid the Nash equilibrium cell.
   d. both a and c.
Answer: a
Difficulty: 02 Medium
Topic: Cooperation in Repeated Strategic Decisions
AACSB: Reflective Thinking
Blooms: Understand
Learning Objective: 13-03

13-52 Punishment for cheating on pricing agreements usually takes the form of
   a. a retaliatory advertising campaign.
   b. a retaliatory price cut.
   c. a legal suit.
   d. a monetary fine.
Answer: b
Difficulty: 01 Easy
Topic: Cooperation in Repeated Strategic Decisions
AACSB: Reflective Thinking
Blooms: Remember
Learning Objective: 13-03

13-53 Cooperation is achieved in an oligopoly market when
   a. most of the firms in the market decide not to cheat.
   b. some of the firms in the market decide not to cheat.
   c. at least one of the firms in the market decide not to cheat.
   d. all of the firms in the market decide not to cheat.
Answer: d
Difficulty: 01 Easy
Topic: Cooperation in Repeated Strategic Decisions
13-54 Price matching is a strategic move that
a. seeks to make cheating unprofitable.
b. must generally be announced publicly in order to have the desired effect.
c. has no usefulness to managers if a simultaneous pricing decision is going to be made only one time.
d. both a and b

Answer: e

Difficulty: 02 Medium
Topic: Cooperation in Repeated Strategic Decisions

13-55 Price matching
a. is a strategic commitment.
b. is a flexible pledge to match any lower prices offered by rivals.
c. must be irreversible in order to have the desired effect.
d. both a and c.
e. both b and c

Answer: d

Difficulty: 02 Medium
Topic: Cooperation in Repeated Strategic Decisions

13-56 Tacit collusion
a. is a form of cooperation that occurs without explicit communication.
b. is illegal per se in the U.S.
c. involves strict adherence to quotas.
d. seems to rare, especially among manufacturers of consumer durables.

Answer: a

Difficulty: 01 Easy
Topic: Cooperation in Repeated Strategic Decisions

13-57 Price leadership
a. is rather uncommon today.
b. is a pricing arrangement in which one firm in an oligopoly agrees to act as a cartel manager and set a price that will maximize the profits of all the firms in the oligopoly market.
c. would not be useful to a dominant firm if it could eliminate all its rivals through a price war.
d. none of the above
Answer: d
Difficulty: 01 Easy
Topic: Cooperation in Repeated Strategic Decisions
AACSB: Reflective Thinking
Blooms: Understand
Learning Objective: 13-03

13-58 Tacit collusion in a market represents a method for
a. collusion to discourage entry into the market.
b. a price-fixing agreement when such agreements are legal.
c. agreeing on price without explicit communication among firms.
d. cheating on a cartel price.
e. none of the above
Answer: c
Difficulty: 01 Easy
Topic: Cooperation in Repeated Strategic Decisions
AACSB: Reflective Thinking
Blooms: Remember
Learning Objective: 13-03

13-59 Which of the following will NOT make cooperation more likely?
a. any action that reduces the benefit of cheating
b. a strategy of price matching
c. posting prices on the internet
d. any action that makes it more costly to monitor rival’s prices.
e. developing a reputation for harshly punishing cheating
Answer: d
Difficulty: 02 Medium
Topic: Cooperation in Repeated Strategic Decisions
AACSB: Reflective Thinking
Blooms: Understand
Learning Objective: 13-03

13-60 The managers of Alpha and Beta must make repeated advertising decisions simultaneously at the beginning of every month. They choose either low or high levels of advertising expenditure. They both employ a discount rate of 2.5 percent per month.

<table>
<thead>
<tr>
<th>Beta’s advertising</th>
<th>High</th>
<th>Low</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alpha’s advertising</td>
<td></td>
<td></td>
</tr>
<tr>
<td>High</td>
<td>A $7,000, $3,500</td>
<td>B $2,000, $6,500</td>
</tr>
<tr>
<td>Low</td>
<td>C $8,000, $1,000</td>
<td>D $4,000, $2,000</td>
</tr>
</tbody>
</table>

Payoffs in dollars of monthly profits.

If both firms cooperate, Alpha will choose a __________ level of advertising and Beta will choose a __________ level of advertising.
a. high; high
b. high; low
c. low; high

Chapter 13: STRATEGIC DECISION MAKING IN OLIGOPOLY MARKETS
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The managers of Alpha and Beta must make repeated advertising decisions simultaneously at the beginning of every month. They choose either low or high levels of advertising expenditure. They both employ a discount rate of 2.5 percent per month.

**Beta’s advertising**

<table>
<thead>
<tr>
<th>Alpha’s Advertising</th>
<th>High</th>
<th>Low</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>High</td>
<td>Low</td>
</tr>
<tr>
<td>A</td>
<td>$7,000, $3,500</td>
<td>$2,000, $6,500</td>
</tr>
<tr>
<td>B</td>
<td>$2,000, $6,500</td>
<td></td>
</tr>
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<td>C</td>
<td>$8,000, $1,000</td>
<td>$4,000, $2,000</td>
</tr>
<tr>
<td>D</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Payoffs in dollars of monthly profits.

If Beta expects to get caught the first month it cheats, the present value of the benefits of cheating is

- a. $1,234
- b. $2,927

**Answer:** b

**Difficulty:** 02 Medium

**Topic:** Decision Making When Rivals Make Simultaneous Decisions

**AACSB:** Analytic

**Blooms:** Apply

**Learning Objective:** 13-01
c. \( \frac{6,500}{(1.025)} \)
d. \( \frac{6,500}{(1.025)^2} \)

Answer: b

Difficulty: 03 Hard
Topic: Decision Making When Rivals Make Simultaneous Decisions
AACSB: Analytic
Blooms: Apply
Learning Objective: 13-01

13-63 The managers of Alpha and Beta must make repeated advertising decisions simultaneously at the beginning of every month. They choose either low or high levels of advertising expenditure. They both employ a discount rate of 2.5 percent per month.

<table>
<thead>
<tr>
<th>Alpha’s advertising</th>
<th>Beta’s advertising</th>
<th>Payoffs in dollars of monthly profits</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>High</td>
<td>$7,000, $3,500</td>
</tr>
<tr>
<td>Low</td>
<td>Low</td>
<td>$8,000, $1,000</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Beta’s advertising</strong></td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>$2,000, $6,500</td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>$4,000, $2,000</td>
</tr>
</tbody>
</table>

When Alpha punishes Beta with a retaliatory adjustment in its advertising expenditures, Beta will suffer an undiscounted penalty of $_________ for each month that punishment continues.

a. $1,500
b. $2,000
c. $3,000
d. $4,000
e. $5,000

Answer: a

Difficulty: 02 Medium
Topic: Cooperation in Repeated Strategic Decisions
AACSB: Analytic
Blooms: Apply
Learning Objective: 13-03

13-64 The managers of Alpha and Beta must make repeated advertising decisions simultaneously at the beginning of every month. They choose either low or high levels of advertising expenditure. They both employ a discount rate of 2.5 percent per month.
Beta expects punishment to last for two months after being caught (i.e., to be penalized in months 2 and 3). What would be the value-maximizing decision for Beta?

a. Cooperate since $3,000 > PV\text{Benefits of cheating}.$

b. Cooperate since $6,500/(1.025) > PV\text{Benefits of cheating}.$

c. Cheat since $PV\text{Benefits of cheating} > 2,820.$

d. Cheat since $PV\text{Benefits of cheating} < 5,641.$

Answer: c

Difficulty: 03 Hard

Topic: Cooperation in Repeated Strategic Decisions

AACSB: Analytic

Blooms: Apply

Learning Objective: 13-03
Burger Doodle, the incumbent firm, wishes to set a limit price of $8 (rather than the profit-maximizing price of $12) to prevent Designer Burger from entering its profitable market. The game tree above shows the payoffs for various decisions. Burger Doodle makes its pricing decision, then Designer Burger decides whether to enter or stay out of the market. If Designer Burger chooses to enter the market, then Burger Doodle may or may not decide to accommodate Designer’s entry by changing its initial price to the Nash equilibrium price of $10.

In order for Burger Doodle to successfully implement a limit pricing strategy for entry deterrence, it must be able to

a. convince Designer Burger that it will set the Nash price of $10 should Designer Burger decide to stay out of the market.

b. convince Designer Burger that it will set the Nash price of $10 should Designer Burger decide to enter the market.

c. make a credible commitment to maintain its initial price should Designer Burger decide to enter the market.

d. make a credible promise to price its burgers at $12.

e. make a credible threat to lower its price to $8 should Designer Burger choose to enter it market.

Answer: c

Difficulty: 03 Hard

Topic: Strategic Entry Deterrence

AACSB: Analytic

Bloom’s: Apply

Learning Objective: 13-04
Burger Doodle, the incumbent firm, wishes to set a limit price of $8 (rather than the profit-maximizing price of $12) to prevent Designer Burger from entering its profitable market. The game tree above shows the payoffs for various decisions. Burger Doodle makes its pricing decision, then Designer Burger decides whether to enter or stay out of the market. If Designer Burger chooses to enter the market, then Burger Doodle may or may not decide to accommodate Designer’s entry by changing its initial price to the Nash equilibrium price of $10.

If the condition in the question above is met, Burger Doodle will set price equal to $\text{________}$ and it will earn $\text{________}$ of profit while Designer Burger will earn $\text{________}$ of profit.

- a. 8; 125,000; 0
- b. 8; 75,000; –40,000
- c. 10; 101,000; 25,000
- d. 10; 96,000; 25,000
- e. 12; 165,000; 0

Answer: a

Difficulty: 03 Hard

Topic: Strategic Entry Deterrence

AACSB: Analytic

Blooms: Apply

Learning Objective: 13-04
Burger Doodle, the incumbent firm, wishes to set a limit price of $8 (rather than the profit-maximizing price of $12) to prevent Designer Burger from entering its profitable market. The game tree above shows the payoffs for various decisions. Burger Doodle makes its pricing decision, then Designer Burger decides whether to enter or stay out of the market. If Designer Burger chooses to enter the market, then Burger Doodle may or may not decide to accommodate Designer’s entry by changing its initial price to the Nash equilibrium price of $10.

If the condition in the question 13-67 is NOT met, Burger Doodle will set price equal to $\$_______ at decision node 3 and it will earn $\$_______ of profit while Designer Burger will earn $\$_______ of profit.

a. 8; 125,000; 0
b. 8; 75,000; −40,000
c. 10; 101,000; 25,000
d. 10; 96,000; 25,000
e. 12; 165,000; 0

Answer: c

Difficulty: 03 Hard
Topic: Strategic Entry Deterrence
AACSB: Analytic
Blooms: Apply
Learning Objective: 13-04
13-68 Burger Doodle, the incumbent firm, wishes to set a limit price of $8 (rather than the profit-maximizing price of $12) to prevent Designer Burger from entering its profitable market. The game tree above shows the payoffs for various decisions. Burger Doodle makes its pricing decision, then Designer Burger decides whether to enter or stay out of the market. If Designer Burger chooses to enter the market, then Burger Doodle may or may not decide to accommodate Designer’s entry by changing its initial price to the Nash equilibrium price of $10.

If the condition in the question above is NOT met, Burger Doodle will set price equal to $________ at decision node 1 and the outcome ____________(is, is not) a Nash equilibrium.

a. 8; is
b. 8; is not
c. 12; is
d. 12; is not
Answer: c

Difficulty: 03 Hard
Topic: Strategic Entry Deterrence
AACSB: Analytic
Blooms: Apply
Learning Objective: 13-04