Managerial Economics 10th edition Samuelson Test Bank

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File: Ch01; CHAPTER 1: **Introduction to Economic Decision Making**

MULTIPLE CHOICE

1. Managerial economics can best be defined as the:
   a) macroeconomics and microeconomics for managers.
   b) study of economic incentives on consumer behavior and demand.
   c) analysis of the labor market through the behavior of workers and managers.
   d) analysis of major management decisions using economic tools.
   e) study of the strategic interaction between firms in a market.

   ANSWER: d
   SECTION REFERENCE: Introduction
   DIFFICULTY LEVEL: Easy

2. Which of the following is *not* one of the steps in managerial decision making?
   a) Predicting the consequences of a decision.
   b) Exploring the alternatives to the decision.
   c) Defining the problem and the objectives of the decision.
   d) Negotiating a consensus to implement the decision.
   e) Performing sensitivity analysis.

   ANSWER: d
   SECTION REFERENCE: Six Steps to Decision Making
   DIFFICULTY LEVEL: Easy

3. Profit maximization is an ambiguous guide to decision making in the private sector because:
   a) firms in the private sector usually do not aim at profit maximization.
   b) the goal of profit maximization contradicts the goal of satisfying the firm's shareholders.
   c) of the presence of risk and uncertainty.
   d) profit-maximization ignores social costs and benefits.
   e) None of the above answers is correct.

   ANSWER: c
   SECTION REFERENCE: Six Steps to Decision Making
   DIFFICULTY LEVEL: Easy

4. Which of the following is true of economic models?
   a) Models are too theoretical to be applicable in real world decisions.
   b) Models are not useful because uncertainty prevents accurate forecasts.
   c) Models are simplified descriptions of processes, relationships, or other phenomena.

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d) Models describe real world situations in complete detail.
e) Models are not useful because they do not take into account complicating and less important features of a problem.

ANSWER: c
SECTION REFERENCE: Six Steps to Decision Making
DIFFICULTY LEVEL: Medium

5. Which of the following correctly describes a deterministic economic model?
a) A deterministic model is a model for which the outcome is predicted with certainty.
b) A deterministic model can only be used to explain short-run economic phenomena.
c) A deterministic model is most useful in identifying long-term trends.
d) A deterministic model is used in the study of normative economics.
e) The outcome of a deterministic model is random and has probabilities attached.

ANSWER: a
SECTION REFERENCE: Six Steps to Decision Making
DIFFICULTY LEVEL: Easy

6. Which of the following correctly explains a probabilistic model?
a) A probabilistic model gives a description of real world economic phenomena.
b) A probabilistic model shows the possibility of a range of outcomes.
c) A probabilistic model examines the changes in economic variables over a period of time.
d) A probabilistic model is based on value judgments.
e) A probabilistic model is used to explain long-run economic phenomena

ANSWER: b
SECTION REFERENCE: Six Steps to Decision Making
DIFFICULTY LEVEL: Easy

7. Maximizing profit by enumerating the profit outcomes of different courses of action
a) Is only applicable to problems with a small number of alternatives.
b) Becomes increasingly costly as the number of choices increase.
c) Always discovers the best possible choice.
d) Provides a useful shortcut to finding the optimal choice.
e) Answers b and c are both correct.

ANSWER: b
SECTION REFERENCE: Six Steps to Decision Making
DIFFICULTY LEVEL: Medium

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8. A beverages company wants to launch a new diet soda aimed at diabetics and health-conscious customers. It will use a _____ economic model to identify its target customers.
a) deterministic
b) dynamic
c) qualitative
d) stochastic
e) probabilistic

ANSWER: a
SECTION REFERENCE: Six Steps to Decision Making
DIFFICULTY LEVEL: Medium

9. Given that the market share of a firm depends on many unpredictable factors, a firm will use a _____ economic model to estimate the market share for one of its products.
a) deterministic
b) dynamic
c) qualitative
d) probabilistic
e) comparative statics

ANSWER: d
SECTION REFERENCE: Six Steps to Decision Making
DIFFICULTY LEVEL: Medium

10. Sensitivity analysis is used by a firm to:
a) analyze the impact of a change in the price of the good on the demand for the good.
b) examine the static effects of an economic decision on the firm's profitability.
c) analyze the social costs and benefits of an economic decision.
d) examine the opportunity costs of an economic decision.
e) examine how an optimal decision is affected if key economic facts vary.

ANSWER: e
SECTION REFERENCE: Six Steps to Decision Making
DIFFICULTY LEVEL: Easy

11. A cosmetics company is conducting a second-year review of one of its newest products. The marketing department expects that the firm will continue to earn profits from the sale of the product in the third year as it did in the past two years. Senior management, however, feels that the profit projections would vary based on other factors such as the price of the

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competitor's products, the actual level of sales, and the possibility of cost reductions. In other words, the senior management is undertaking _____.
a) a sensitivity analysis
b) an enumeration study
c) a benefit-cost analysis
d) a contingent valuation study
e) a strategic analysis

ANSWER: a
SECTION REFERENCE: Six Steps to Decision Making
DIFFICULTY LEVEL: Medium

12. According to the satisficing model of management behavior, the goal of a firm is to:
a) satisfy customers, employees, and shareholders.
b) maximize the gain to society and not just to shareholders.
c) achieve a satisfactory level of performance against a benchmark.
d) maximize sales revenue and not necessarily the value of the firm.
e) maximize its market share even at the cost of profit.

ANSWER: c
SECTION REFERENCE: Private and Public Decisions: An Economic View
DIFFICULTY LEVEL: Easy

13. According to the theory of the firm, the management's ultimate objective is to:
a) maximize short-term profit, even if this sacrifices long-term profit.
b) maximize the value of the firm.
c) increase production to the highest possible level.
d) increase the market share of the firm.
e) diversify into as many product lines as the firm can.

ANSWER: b
SECTION REFERENCE: Private and Public Decisions: An Economic View
DIFFICULTY LEVEL: Easy

14. A coffee shop decides that it will increase its market share to 55% by the end of the year by lowering the price of a cup of coffee. The price cut does increase the firm's sales and market share but reduces its overall profit. Which of the following best explains the firm's decision?
a) Satisficing behavior.
b) Price discrimination.
c) Social responsibility.

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d) A sensitivity analysis.
e) Revenue maximization.

ANSWER: e
SECTION REFERENCE: Private and Public Decisions: An Economic View
DIFFICULTY LEVEL: Medium

15. Ann is a manager at a private construction company. David works in the city planning department of the government. Based on this information, which of the following is most likely to be true?
a) David will make decisions based on the value generated to shareholders.
b) Ann will not have to factor in risk or uncertainty when making a decision.
c) David will make decisions based on maximization of profit.
d) Ann's decisions will be guided by the motive of social welfare.
e) David will make decisions based on benefit-cost analysis.

ANSWER: e
SECTION REFERENCE: Private and Public Decisions: An Economic View
DIFFICULTY LEVEL: Medium

16. A research study estimates that the direct cost of constructing a bridge connecting two boroughs in a city is $10 million. The revenue from the tolls on the bridge is estimated to be $8 million. The dollar value of pollution from the construction is estimated to be $5 million but the dollar value of the benefit to the city's residents is calculated to be $20 million. The construction of the bridge is most likely to be undertaken by:
a) the government because revenues exceed costs.
b) the government because the total benefits exceed total costs.
c) a private firm because the total benefits exceed total costs.
d) a private firm because revenues exceed direct costs.
e) a private firm because the revenues exceed indirect costs.

ANSWER: b
SECTION REFERENCE: Private and Public Decisions: An Economic View
DIFFICULTY LEVEL: Medium

17. In evaluating public programs, benefit-cost analysis:
a) takes into account only the benefits that society gains from public programs.
b) states that a program should be undertaken only if it generates revenue.
c) states that a program should be undertaken only if total benefits exceed total costs.
d) takes into account only the direct costs of the program.

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e) states that a program should be undertaken only if there are no indirect costs.

ANSWER: c
SECTION REFERENCE: Private and Public Decisions: An Economic View
DIFFICULTY LEVEL: Easy

18. The government is deciding whether it should build a veteran's hospital in an urban area. It will choose to build the hospital only if:
a) the hospital generates positive revenues.
b) the cost of building the hospital is low.
c) the profits from the hospital are positive.
d) the opportunity cost of building the hospital is zero.
e) the total benefits from the hospital exceed total costs.

ANSWER: e
SECTION REFERENCE: 4
DIFFICULTY LEVEL: Medium

19. The study of behavioral economics shows that decision makers:
a) are not limited by cognitive constraints.
b) are incapable of learning from their mistakes.
c) are prone to biases, mistakes, and pitfalls.
d) are guided solely by monetary incentives.
e) make decisions in a highly calculative and rational manner.

ANSWER: c
SECTION REFERENCE: Private and Public Decisions: An Economic View
DIFFICULTY LEVEL: Easy

SHORT ANSWERS

20. Carefully define managerial economics, and explain how it is useful in decision-making.

ANSWER: Managerial economics is the analysis of major management decisions using the tools of economics. It applies familiar concepts such as demand, cost, market structure, and resource allocation. Managerial economics emphasizes the theory of the firm and employs quantitative analysis in making decisions. Simple models are used to emphasize the most important features of the decision problem.
SECTION REFERENCE: Introduction
DIFFICULTY LEVEL: Easy

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21. How can the decision making process be structured to analyze complicated decisions?

ANSWER: The decision making process can be summarized into a basic framework and used in economic analysis. Decision making can be structured into the following six steps:
(1) Defining the problem: Since decisions are not made in a vacuum, the context of the decision, the problem itself, and the decision maker need to be identified.
(2) Setting the objectives: The objectives that are set will determine the guiding rule for the decision. For example, if the objective is to maximize profit then the decision that is most likely to lead to profit-maximization will be chosen over a decision that might lead to maximization of market share.
(3) Exploring the alternatives: All the alternative courses of action need to be listed and analyzed.
(4) Predicting the consequences: Although the outcome of a decision cannot be predicted with certainty, predictive models can be used to predict outcomes with a reasonable level of certainty.
(5) Choosing an option: The right choice should be made based on all the previous steps. If the decision is not immediately clear, various methods like marginal analysis, decision trees, game theory, benefit-cost analysis, and linear programming can be used to clarify the analysis.
(6) Using sensitivity analysis: Once a choice is made, sensitivity analysis can be used to check whether and how the decision will be affected by changes in economic conditions or key assumptions.
SECTION REFERENCE: Six Steps to Decision Making
DIFFICULTY LEVEL: Easy

22. What are the two difficulties that may make profit maximization an ambiguous guide to decision making? Explain.

ANSWER: The timing of benefits and costs and the presence of risk and uncertainty are the two difficulties that complicate the objective of profit maximization. Generally speaking, many decisions involve making costly investments "up front" in return for benefits or profits in the future. This requires the decision-maker to develop comparable measures of present and future monetary values. Uncertainty underscores the fact that some outcomes are not known with complete confidence. Costs may be far larger than expected, benefits far smaller, and delays in completion may diminish profits. The manager's task is to foresee the range of possible outcomes and to estimate the likelihood of different consequences.
SECTION REFERENCE: Six Steps to Decision Making
DIFFICULTY LEVEL: Easy

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23. One of the major steps in decision-making is to explore the alternatives. Do most managerial decisions have a few, limited number of options? Explain. Illustrate your answer with an appropriate example.

    ANSWER: Most decisions have several (often many) competing options. Even when the choices are limited, there are often more alternatives than first meet the eye. For example, suppose Disney is deciding whether to build a new theme park. It must choose the location, and the scale of operation, and when its opening should be scheduled. In addition, subsequent decisions will involve advertising and pricing strategies. Many managerial decisions involve more than a once-for-all choice from a set of options. Instead, managers face a sequence of decisions. For instance, whether a firm should attempt to develop a new product and if all goes well, when and how should it launch and promote the product. The firm will also have to decide how it should price the product and gear up capacity to supply the expected sales at its chosen price.
    SECTION REFERENCE: Six Steps to Decision Making
    DIFFICULTY LEVEL: Easy

24. Carefully define the term "model" and explain how models are used in managerial economics.

    ANSWER: A model is a simplified description of a process, relationship, or other phenomenon. The two main types of models are deterministic and probabilistic. Models select key features for analysis (and, therefore, they deliberately ignore less important features). Models are useful to managers because they show how the various options that a manager faces translate into outcomes. Models usually help in explaining past outcomes or in predicting future outcomes.
    SECTION REFERENCE: Six Steps to Decision Making
    DIFFICULTY LEVEL: Easy

25. Carefully define probabilistic and deterministic models, and explain how they differ.

    ANSWER: Deterministic models are predictive models in which the outcome of a decision is certain (or close enough that it doesn’t matter). In probabilistic models, there is no one certain outcome but, rather, many possible outcomes with a probability attached to each.
    SECTION REFERENCE: Six Steps to Decision Making
    DIFFICULTY LEVEL: Easy

26. Value maximization is the main objective of top management. Briefly describe the alternative objectives.

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ANSWER: The three most important alternatives are: satisficing behavior, sales maximization, and pursuing the firm's social responsibilities to all stakeholders. Satisficing behavior posits that firms will sometimes strive for second-best, or an acceptable level of performance as against the highest level of maximization. Sales targets may closely be linked to managers' compensation and so firms may also strive to maximize sales subject to a certain level of profit. Firms that pursue social responsibility as their objective would aim to satisfy not only customers and investors but also society, the environment, and other stakeholders. All these objectives may be pursued at the expense of profits.
SECTION REFERENCE: Private and Public Decisions: An Economic View
DIFFICULTY LEVEL: Medium

27. Explain why the private firm's objective and actions are often at odds with the objectives of public sector decision makers.

ANSWER: The private firm's goal is to maximize profit and thereby the value of the firm. Its main financial responsibility is to its shareholders. The objective of government decisions and regulations is much broader: to maximize social welfare across all affected parties: consumers, residents, workers, and other effected citizens. Often, private and public goals are in conflict. For instance, a firm might maximize profit by producing pollution, thus harming the environment. Conversely, the government might undertake a worthy public investment even though its revenues are insufficient to cover its costs. (General tax revenues finance the difference.) However, when private firms compete vigorously with one another in perfectly competitive markets, their profit-maximizing behavior directly promotes overall social welfare.
SECTION REFERENCE: Private and Public Decisions: An Economic View
DIFFICULTY LEVEL: Medium

28. Ecotopia is a developing country that is facing a growing need for energy to power its industries and fuel its development. The Ecotopian government's proposal to set up a nuclear energy plant has drawn widespread protests from environmental activists across the country. Since this is an issue that affects a large number of people, how would one weight the benefits and costs to make a decision that is best for the society as a whole?

ANSWER: Setting up a nuclear plant in order to satisfy civilian energy needs affects the welfare of the society in general. In such a situation, since there are gains and losses for different groups of people, benefit-cost analysis should be used. Benefit-cost analysis weighs the total benefits and total costs of a decision (irrespective of who these benefits and losses accrue to). When setting up a nuclear plant, the benefits and costs need to be assigned a monetary value. If the value of the benefits is higher than the value of the costs, then the project should be undertaken. One of the possible benefits from nuclear energy is that Ecotopia can reduce its dependence on fossil fuels. Nuclear energy generation also does not emit greenhouse gases. Relevant costs include the high investment sum to build the plant, its ongoing operating costs, and safety-related costs including disposing of nuclear fuel. All these benefits and costs should be measured and valued, usually dollars, and then compared.
SECTION REFERENCE: Private and Public Decisions: An Economic View

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DIFFICULTY LEVEL: Medium

29. How does decision making in the private, for-profit sector differ from decision making in the public sector?

ANSWER: In the private sector, managers seek maximum value for the firm. Managers focus primarily on the effects of a decision on the firm's profits. With an eye on profit, managers will not generally take into account the impacts (benefits and costs) on other parties. In the public sector, decisions are guided by benefit-cost analysis (not simply profit analysis). The benefits and costs to all affected parties (not just the program's revenues and costs) are evaluated and totaled in order to make a sound decision.
SECTION REFERENCE: Private and Public Decisions: An Economic View
DIFFICULTY LEVEL: Medium

ESSAYS

30. Amanda is a troubleshooter for a major manufacturing firm. A particular facility has experienced problems with quality for several years. In addition, there have been some major problems with the facility's labor union. A bitter strike, lasting six months, occurred prior to signing the current contract. Past management teams have visited and inspected the site but have been unable to achieve change, despite detailed study and recommendations. Recently, sales of the facility's product line have declined in the face of increased import competition from an East Asian country, and this is unlikely to change in the near future. Currently, the Board is considering two new courses of action. One is retooling the facility to manufacture a new line of products. This would involve capital costs of several millions of dollars. It would also mean that there would be no production from the facility while retooling and retraining takes place. The second option is closing down the facility. This would involve costs in the form of termination benefits, as well as funding some pension benefits of senior employees. There appear to be no buyers for the plant, and it would likely remain idle for some time, while continuing to be a tax drain on the company. How would Amanda use the steps of decision-making and the concept of value maximization to recommend a course of action to the Board? Explain.

ANSWER: Management finds itself on the horns of a dilemma since it appears that any course of action – continuing current production, retooling, or closing the plant – will involve losses. Nonetheless, the tools of managerial economics still apply. Here, the firm seeks the course of action that minimizes its losses (If losses are minimized, then the value of the firm is maintained as far as possible). Thus, management must carefully estimate and compare the relative costs of its options.
SECTION REFERENCE: Six Steps to Decision Making
DIFFICULTY LEVEL: Medium

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31. Carefully define sensitivity analysis, and provide three examples of how a manager might use it.

ANSWER: Sensitivity analysis considers how an optimal decision would change if key economic facts or conditions were altered. Some examples of how to use it include:
(1) predicting sales under different macroeconomic conditions (growth or recession)
(2) the effects of escalating oil prices on energy costs
(3) the effect on the sales of a product if a competitor cuts prices
In each case, the changing factor not only affects the firm's profit, it also implies changes in the firm's production and pricing decisions.
SECTION REFERENCE: Six Steps to Decision Making
DIFFICULTY LEVEL: Medium

32. A company is thinking about significantly expanding its production capacity. What variables would it consider in making this decision? What might be useful sources of information for estimating the potential profit impact of the expansion?

ANSWER: The most important variables are increased sales revenues and increased costs. Information on sales revenue would include current price and quantity data and the past growth rate of sales, and the impact of the firm's advertising and promotional spending (and, of course anticipating the likely response of rival firms) on its sales. Information on costs would include the capital cost of building new facilities or expanding old ones (including borrowing costs influenced by interest rates) and annual fixed and variable costs (for equipment, labor and energy) needed to produce the greater level of output. Note that the expansion might bring the firm some reductions in average costs due to the use of new technology.
SECTION REFERENCE: Private and Public Decisions: An Economic View
DIFFICULTY LEVEL: Medium

33. Mike heads a new startup firm that decides to open a number of clinics that perform laser eye surgery to correct common vision problems. He hopes that over time his company can claim a substantial share of what is estimated to be an $18 billion per year market. Briefly describe the most important factors influencing his venture's revenues and costs. Describe the most important risks.

ANSWER: A complete answer should point out a number of obvious factors. On the demand side, the key question is the size of the total market willing and able to pay for the laser surgery (so as to dispense with glasses and contact lens). Because the procedure is not covered by insurance, demand will depend directly on the price (per eye) Mike's company and others set for the procedure. Demand also depends upon the real and perceived risks of laser surgery. Demand issues raise a number of decision questions. How should the firm price and promote the clinics and procedures? Should it enlist elite physicians to oversee and

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endorse your firm's services (as a means of differentiation)? Given current competitors and future entrants, what share of the total market can the firm reasonably expect to claim? Costs are equally important. Medical equipment and office space represent significant capital costs. Besides other operating costs, Mike's company will pay a significant licensing fee (royalty) for each procedure to the laser's patent holder. Of course, the ultimate average cost per patient will depend on the number of patients the firm attracts and on the scale of operation. Finally, there are significant risks – not only uncertainties on the revenue and cost sides already mentioned – but medical risks to patients and liability and regulatory risks to the company.
SECTION REFERENCE: Private and Public Decisions: An Economic View
DIFFICULTY LEVEL: Hard

34. A small nation is considering upgrading its air force to incorporate new technology. It faces two main choices. The first is to acquire a fleet of the latest fighter aircraft, with the newest electronics and weapons. The cost of the acquisition (assuming that the U.S. President and Congress agree to the sale) is $45 million per plane, including a stock of spare parts that should last five years. The second choice is to buy an electronic upgrade for existing aircraft, with a complete overhaul of the airframes. The cost of such an upgrade is $8 million per plane, with about a 10% loss of fleet because of damage beyond repair and "cannibalization" to obtain the highest number of flyable planes. The upgrading of existing planes results in aircraft with about 90% of the capability of the new aircraft.

    Top pilots in the small country's air force are concerned that they may not be flying the best aircraft, and could face a disadvantage in combat against newer planes flown by a potential enemy. However, they acknowledge that if a numerical superiority against the enemy can be obtained, an overall victory is still likely. Their theory is that three of the upgraded planes should be able to win against one of the newer planes flown by an enemy (although the pilots expect higher losses in combat). How would an economic consultant advise the defense ministry of the small country in deciding how best to spend its available budget for air defense? What objective(s) are important for this decision? What are the pros and cons of the available options?

ANSWER: In this case, the objective is not maximum profit or operating revenue, but obtaining the best possible air force within the prescribed budget. The two main alternatives are to purchase new aircraft, or upgrade existing planes. Clearly, an important consideration is the difference in cost of the two possibilities. An upgrade is far cheaper, and results in 90% of the operational capability of the new plane. For $45 million spent on a single new plane, the country can upgrade between five and six existing aircrafts. Assuming that the air force pilots are correct that three of the older, upgraded planes can defeat a single, newer plane, upgrading provides a greater effective amount of firepower in a future air conflict. However, an additional issue should be taken into account: higher pilot losses can be expected with the upgrade. The cost of lives lost can be important for a country that places a high value on human life. A sound decision should indicate at least a third possible choice, that is, to order a small number of new planes in addition to upgrading most of the old planes. The new planes could accompany the older planes on missions and stand by to

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