Decision Support and Business Intelligence Systems, 9e **(Turban)**
Chapter 1   Decision Support Systems and Business Intelligence

1) When faced with a turbulent business environment, organizations are best able to survive or even excel by minimizing changes until the environment stabilizes.
Answer: FALSE
Diff: 2   Page Ref: 2

2) The management of Norfolk Southern, a large freight railroad company, invested in data warehousing technologies. Even though railroad transportation is a mature industry, Norfolk Southern gained a competitive advantage by using its data warehousing technologies to squeeze additional efficiency from its operations.
Answer: TRUE
Diff: 2   Page Ref: 4

3) Globalization has significantly reduced the complexity of the business environment. For example, companies can find suppliers and customers in many countries where materials are cheaper, which reduces competition and complexity.
Answer: FALSE
Diff: 3   Page Ref: 5

4) One of the major objectives of computerized decision support is to minimize the gap between the current performance of an organization and its desired performance.
Answer: TRUE
Diff: 2   Page Ref: 6

5) One measure of productivity is the ratio of inputs to outputs.
Answer: FALSE
Diff: 2   Page Ref: 7

6) Managers, especially those at high managerial levels, are primarily hands-on problem solvers.
Answer: FALSE
Diff: 2   Page Ref: 7

7) Because managerial decision making is complex, it is more important to emphasize methodical, analytical decision making rather than interpersonal communication skills.
Answer: TRUE
Diff: 3   Page Ref: 7

8) Government regulations, political instability, competition, and changing consumer demands cause uncertainty that makes it difficult to predict the consequences of a decision.
Answer: TRUE
Diff: 2   Page Ref: 8

9) Computer applications have progressed from transaction processing and monitoring to problem analysis and solution applications, and much of the activity is supported by spreadsheet technologies.
Answer: FALSE
Diff: 2   Page Ref: 9

10) Computerized systems enable people to overcome their *cognitive limits* by quickly accessing and processing vast amounts of stored information.
Answer: TRUE
Diff: 2   Page Ref: 10

11) Accounts receivable and accounts payable processes are highly structured, which makes them easy to program.
Answer: TRUE
Diff: 2   Page Ref: 11

12) Research and development (R & D) planning and social responsibility planning are unstructured decisions, which cannot be supported by computerized decision support systems.
Answer: FALSE
Diff: 3   Page Ref: 11

13) The first phase in the decision-making process is design which involves inventing, developing, and analyzing possible alternative courses of action or solutions.
Answer: FALSE
Diff: 2   Page Ref: 12

14) Automated decision systems (ADS) are rule-based systems that provide solutions to repetitive managerial problems, usually in one functional area (e.g., finance, manufacturing).
Answer: TRUE
Diff: 3   Page Ref: 14

15) The term Decision Support Systems (DSS) can be used as an umbrella term to describe any computerized system that supports decision making in an organization.
Answer: FALSE
Diff: 1   Page Ref: 16

16) The two major DSS types are the *model-oriented DSS*, in which quantitative models are used to generate a recommended solution to a problem, and *data-oriented DSS*, which support ad hoc reporting and queries.
Answer: TRUE
Diff: 2   Page Ref: 17

17) A BI system has three major components: a *data warehouse* with source data; *business performance management (BPM)* for monitoring and analyzing performance; and a *user interface* such as a dashboard.
Answer: FALSE
Diff: 2   Page Ref: 20

18) Most DSS are constructed to *directly* support specific decision making. In contrast, BI systems, in general typically provide accurate and timely information to support decision support *indirectly*. This difference is diminishing because decision support tools are being added to BI software packages.
Answer: TRUE
Diff: 3   Page Ref: 24

19) Dashboards and information portals are data visualization tools.
Answer: TRUE
Diff: 2   Page Ref: 26

20) The objective of computerized decision support, regardless of its name or nature, is to help managers solve problems and assess opportunities faster and better than would be possible without computers.
Answer: TRUE
Diff: 2   Page Ref: 27

21) Norfolk Southern Railroad built a _____ application that pulls data from the data warehouse and then graphically depicts actual performance against planned performance.
A) dashboard
B) graphical interface
C) transaction processing
D) forecasting
Answer: A
Diff: 2   Page Ref: 3

22) Norfolk Southern Railroad invested in a Teradata _____, which is a central repository of historical data that is organized for easy access and manipulation to support decision making.
A) database
B) data warehouse
C) data repository
D) data disk
Answer: B
Diff: 2   Page Ref: 3

23) Numerous types of business _____ result from today's business climate.
A) decisions
B) responses
C) support
D) pressures
Answer: D
Diff: 1   Page Ref: 5

24) Companies are facing each of the following impacts of globalization except:
A) Easier to find suppliers and customers in many countries
B) Less complex business environment
C) Cheaper materials
D) More and stronger competitors
Answer: B
Diff: 2   Page Ref: 5

25) Which of the following is an organizational response to a business environmental factor?
A) customer demand
B) government regulations
C) new business models
D) globalization
Answer: C
Diff: 3   Page Ref: 5

26) Business environment factors that create pressures on organizations include all of the following except:
A) workforce that is younger and shrinking
B) need for real-time, on-demand transactions
C) booming electronic markets on the Internet
D) innovative marketing methods
Answer: A
Diff: 1   Page Ref: 6

27) One of the major objectives of _____ is to facilitate closing the gap between the current performance of an organization and its desired performance, as expressed in its mission, objectives, and goals.
A) business alliances
B) customer relationships
C) business models
D) computerized decision support
Answer: D
Diff: 3   Page Ref: 6

28) Management is a process by which organizational goals are achieved by using resources. The resources are considered _____, and attainment of goals is viewed as the _____ of the process.
A) expenses; profits
B) inputs; output
C) pressures; opportunities
D) scarce; success
Answer: B
Diff: 2   Page Ref: 7

29) Mintzberg's (1980) classic study of top managers suggests that managers perform ten major roles that can be classified into three major categories. Each of the following is one of those major categories except:
A) relational
B) interpersonal
C) decisional
D) informational
Answer: A
Diff: 2 Page Ref: 7

30) For years in the past, managers considered decision making a(n) _____, that is, a talent acquired over a long period through experience and by using intuition.
A) science
B) strategy
C) art
D) methodology
Answer: C
Diff: 2 Page Ref: 7

31) According to Mintzberg's ten managerial roles, a _____ is responsible for the motivation and activation of subordinates.
A) leader
B) figurehead
C) liason
D) spokesperson
Answer: A
Diff: 2 Page Ref: 7

32) According to Mintzberg's ten managerial roles, a _____ is symbolic head; or someone who is obliged to perform a number of routine duties.
A) leader
B) figurehead
C) liason
D) spokesperson
Answer: B
Diff: 2 Page Ref: 7

33) Today's computerized systems possess capabilities that can facilitate decision support in a number of ways, including each of the following except:
A) Increased productivity of group members
B) Improved communication and collaboration
C) Agility support
D) Reduced environmental pressures
Answer: D
Diff: 2 Page Ref: 9

34) Decision-making processes fall along a continuum that ranges from _____ to _____.
A) highly structured; highly unstructured
B) semistructured; unstructured
C) managerial; strategic
D) ad hoc; nonprogrammed
Answer: A
Diff: 2   Page Ref: 11

35) Phases in the decision-making process include each of the following except:
A) intelligence
B) analysis
C) design
D) choice
Answer: B
Diff: 2   Page Ref: 12

36) Solving semistructured problems may involve a combination of both standard solution procedures and human judgment. Management science can provide models for the portion of the decision-making problem that is _____.
A) controlled
B) semistructured
C) unstructured
D) structured
Answer: D
Diff: 2   Page Ref: 13

37) A(n) _____ is a rule-based system that provides a solution, usually in one functional area, such as finance or manufacturing, to a specific repetitive managerial problem.
A) decision support systems (DSS)
B) transaction processing system (TPS)
C) online analytical processing (OLAP) system
D) automated decision system (ADS)
Answer: D
Diff: 2   Page Ref: 14

38) Which of the following is one of the two major types of Decision Support Systems?
A) Number-oriented
B) Text-oriented
C) Model-oriented
D) Application-oriented
Answer: C
Diff: 2   Page Ref: 17

39) Which of the following is not a component of DSS architecture?
A) Data
B) Model
C) Knowledge
D) Web
Answer: D
Diff: 2   Page Ref: 17

40) The major benefit of _____ to the company is the ability to provide accurate information when needed.
A) data warehouse
B) analytical models
C) management information systems
D) business intelligence
Answer: D
Diff: 2   Page Ref: 19

41) Management is a process by which organizational goals are achieved using _____.
Answer: resources
Diff: 2   Page Ref: 7

42) Making a decision means selecting the best alternative from two or more _____ solutions.
Answer: alternative
Diff: 1   Page Ref: 7

43) The level of organization's _____, or the success of management, depends on the performance of managerial functions, such as planning, organizing, directing, and controlling.
Answer: productivity
Diff: 2   Page Ref: 7

44) _____ indicates that an individual's problem-solving capability is limited when a wide range of diverse information and knowledge is required.
Answer: Cognitive limit
Diff: 3   Page Ref: 10

45) _____ defines long-range goals and policies for resource allocation.
Answer: Strategic planning
Diff: 2   Page Ref: 13

46) _____ is the efficient and effective execution of specific tasks.
Answer: Operational control
Diff: 2   Page Ref: 13

47) Gorry and Scott-Morton suggested, for example, that for semistructured decisions and unstructured decisions, conventional _____ and management science (MS) tools are insufficient.
Answer: management information systems (MIS)
Diff: 2   Page Ref: 13

48) _____ involves transforming the real-world problem into an appropriate prototype structure.
Answer: Modeling
Diff: 2   Page Ref: 13

49) Structured problems, which are encountered repeatedly, have a high level of _____.
Answer: structure
Diff: 1   Page Ref: 13

50) _____ is the application of scientific approach and mathematical models to the analysis and solution of managerial decision situations.
Answer: Operations research
Diff: 2   Page Ref: 13

51) Automated Decision Systems (ADS) is a business _____ system that uses intelligence to recommend solution to repetitive decisions (such as pricing).
Answer: rules-based
Diff: 2   Page Ref: 13

52) Decision support systems are computer-based support systems for management decision makers who deal with _____ problems.
Answer: semistructured
Diff: 2   Page Ref: 15

53) _____ is the first component of the DSS architecture.
Answer: Data
Diff: 1   Page Ref: 18

54) The process of business intelligence is based on the _____ of data to information, then to decisions, and finally to actions.
Answer: transformation
Diff: 1   Page Ref: 19

55) Business intelligence's major objective is to enable _____ access to data, enable manipulation of these data, and to provide business managers and analysts the ability to conduct appropriate analysis.
Answer: interactive
Diff: 2   Page Ref: 19

56) _____ is a process of searching for unknown relationships or information in large databases or data warehouses, using intelligent tools such as neural computing, predictive analytics techniques, or advanced statistical methods.
Answer: Data Mining
Diff: 2   Page Ref: 21

57) _____ which is also referred to as corporate performance management (CPM), is an emerging portfolio of applications and methodology that contains evolving BI architecture and tools in its core.
Answer: Business performance management (BPM)
Diff: 2   Page Ref: 22

58) _____ are a type of user interface that provides a comprehensive visual view of corporate performance measures, trends, and exceptions.
Answer: Dashboards
Diff: 2   Page Ref: 22

59) A _____ is a system in which human participants and/or machines perform a business process, using information, technology, and other resources, to produce products and/or services for internal or external customers.
Answer: work system
Diff: 2   Page Ref: 25

60) List four major business environmental factors in today's business environment.
Answer: See Table 1.1 in the textbook.
Diff: 2   Page Ref: 5

61) List and define the three interpersonal roles of a manager as described by Mintzberg.
Answer:
•   *Figurehead*. Symbolic head; obliged to perform a number of routine duties of a legal or social nature.
•   *Leader*. Responsible for the motivation and activation of subordinates; responsible for staffing, training, and associated duties.
•   *Liaison*. Maintains self-developed network of outside contacts and informers who provide favors and information.
Diff: 2   Page Ref: 8

62) List and define the three informational roles of a manager as described by Mintzberg.
Answer:
•   *Monitor*. Seeks and receives a wide variety of special information to develop a thorough understanding of the organization and environment.
•   *Disseminator*. Transmits information received from outsiders or from subordinates to members of the organization.
•   *Spokesperson*. Transmits information to outsiders on the organization's plans, policies, actions, and results.
Diff: 2   Page Ref: 8

63) List and define the four decisional roles of a manager as described by Mintzberg.
Answer:
• *Entrepreneur*. Searches the organization and its environment for opportunities and initiates improvement projects to bring about change.
• *Disturbance handler*. Responsible for corrective action when the organization faces unexpected disturbances.
• *Resource allocator*. Responsible for the allocation of organizational resources of all kinds.
• *Negotiator*. Responsible for representing the organization at major negotiations
Diff: 2   Page Ref: 8

64) Describe the four phases in the decision-making process.
Answer: *Intelligence*. Searching for conditions that call for decisions.
Design. Inventing, developing, and analyzing possible courses of action.
Choice. Selecting a course of action from those available.
Implementation. Adapting the selected course of action to the decision situation.
Diff: 2   Page Ref: 12

65) Distinguish between structured and unstructured problems.
Answer: Unstructured problems are fuzzy, complex problems in which all of the factors are not typically known. There is no cut-and-dry solution to the problem. Structured problems are routine and repetitive for which standard solutions exist.
Diff: 1   Page Ref: 12

66) Describe the three categories that comprise Anthony's taxonomy of management.
Answer:
• *Strategic planning*. Define long-range goals and policies for resource allocation.
• *Management control*. The acquisition and efficient use of resources in the accomplishment of organizational goals
• *Operational control*. The efficient and effective execution of specific tasks
Diff: 2   Page Ref: 12

67) List the steps involved in the management science (MS) approach to problem solving.
Answer:
• Define the problem.
• Classify the problem into a standard category.
• Construct a mathematical model that describes the real-world problem.
• Find possible solutions to the modeled problem and evaluating them.
• Choose and recommend a solution to the problem.
Diff: 2   Page Ref: 13

68) List the components of the architecture of business intelligence.
Answer:
• Data warehouse with source data
• Business analytics, a collection of tools for manipulating, mining, and analyzing the data in the data warehouse
• Business performance management (BPM) for monitoring and analysis of performance
• User interface
Diff: 1   Page Ref: 20

69) Describe the nine elements of a work system.
Answer:
1. *Business process*. Variations in the process rationale, sequence of steps, or in the methods used for performing particular steps
2. *Participants*. Better training, better skills, higher levels of commitment, and better real-time or delayed feedback
3. *Information*. Better information quality, information availability, and information presentation
4. *Technology*. Better data storage and retrieval, models, algorithms, statistical or graphical capabilities; better computer interaction
5. *Product and services*. Better ways to evaluate potential decisions
6. *Customers*. Better ways to involve customers in the decision process and to obtain greater clarity about their needs
7. *Infrastructure*. More effective use of shared infrastructure might lead to improvements
8. *Environment*. Better methods for incorporating concerns from the surrounding environment
9. *Strategy*. A fundamentally different operational strategy for the work system
Diff: 2   Page Ref: 25