Business Analytics Data Science and AI 6th edition Sharda Test Bank

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Business Intelligence, Analytics, Data Science, and AI, 6e **(Sharda)**
Chapter 1 An Overview of Business Analytics, Data Science, and AI

1) Computerized support is used for organizational and managerial decisions that are responses to external pressures and to take advantage of market opportunities.
Answer: TRUE
Learning Objective: 1.1: Get introduced to the idea of analytics through understanding applications in sports.

2) The use of statistics in baseball by the Oakland Athletics, as described in the *Moneyball* story mentioned in the text, is an example of the effectiveness of data analytics.
Answer: TRUE
Learning Objective: 1.1: Get introduced to the idea of analytics through understanding applications in sports.

3) Computer applications have moved from transaction processing and monitoring activities to problem analysis and decision support applications.
Answer: TRUE
Learning Objective: 1.2: Understand the evolution of computer-based support for decision making.

4) The growth in hardware, software, and network capacities were the core contributors to the proliferation of decision support and analytics systems.
Answer: FALSE
Learning Objective: 1.2: Understand the evolution of computer-based support for decision making.

5) Managing data warehouses requires special methods, including parallel and cloud computing along with Hadoop/Spark.
Answer: TRUE
Learning Objective: 1.2: Understand the evolution of computer-based support for decision making.

6) Managing information on operations, customers, internal procedures, and employee interactions is the domain of cognitive science.
Answer: FALSE
Learning Objective: 1.2: Understand the evolution of computer-based support for decision making.

7) Simon's decision process involves three major phases: intelligence, design, and choice.
Answer: TRUE
Learning Objective: 1.3: Understand the basic phases of decision making so as to appreciate the need for technologies for supporting decision making.

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8) The intelligence phase of the decision process involves developing a model that represents the underlying system.
Answer: FALSE
Learning Objective: 1.3: Understand the basic phases of decision making so as to appreciate the need for technologies for supporting decision making.

9) In the design phase of the human decision process, the problem or opportunity is defined based on all available data and information.
Answer: FALSE
Learning Objective: 1.3: Understand the basic phases of decision making so as to appreciate the need for technologies for supporting decision making.

10) During the early days of analytics, data was often obtained from the domain experts using manual processes to build mathematical or knowledge-based models.
Answer: TRUE
Learning Objective: 1.4: Learn how basic computerized decision support has evolved to include analytics/data science/AI.

11) Decision support system (DSS), analytics, and management information system (MIS) have precise definitions agreed to by most practitioners.
Answer: FALSE
Learning Objective: 1.4: Learn how basic computerized decision support has evolved to include analytics/data science/AI.

12) Artificial intelligence has become the latest phase in the evolution of computerized decision support.
Answer: TRUE
Learning Objective: 1.4: Learn how basic computerized decision support has evolved to include analytics/data science/AI.

13) Performance dashboards provide real-time visual summaries of key performance indicators (KPIs).
Answer: TRUE
Learning Objective: 1.4: Learn how basic computerized decision support has evolved to include analytics/data science/AI.

14) Business intelligence is a specific term that describes a variety of information technology and data capturing focused system architectures.
Answer: FALSE
Learning Objective: 1.5: Briefly understand the history and evolution of business intelligence–a precursor to analytics/AI.

15) Major commercial business intelligence (BI) products and services were well established in the early 1970s.
Answer: FALSE
Learning Objective: 1.5: Briefly understand the history and evolution of business intelligence–a precursor to analytics/AI.

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16) Information systems that support such transactions as ATM withdrawals, bank deposits, and cash register scans at the grocery store represent online transaction processing systems (OLAP).
Answer: FALSE
Learning Objective: 1.5: Briefly understand the history and evolution of business intelligence–a precursor to analytics/AI.

17) Many business users in the 1980s referred to their mainframes as "the black hole," because all the information went into it, but little ever came back, and ad hoc real-time querying was virtually impossible.
Answer: TRUE
Learning Objective: 1.5: Briefly understand the history and evolution of business intelligence–a precursor to analytics/AI.

18) Data warehouses are intended to work with informational data used for online transaction processing (OLTP) systems.
Answer: FALSE
Learning Objective: 1.5: Briefly understand the history and evolution of business intelligence–a precursor to analytics/AI.

19) Successful BI is a tool developed by and developed for the information systems department.
Answer: FALSE
Learning Objective: 1.5: Briefly understand the history and evolution of business intelligence–a precursor to analytics/AI.

20) Business Intelligence (BI) is an umbrella term that combines architectures, tools, databases, analytical tools, applications, and methodologies.
Answer: TRUE
Learning Objective: 1.5: Briefly understand the history and evolution of business intelligence–a precursor to analytics/AI.

21) The competitive imperatives for BI include providing the right information to the right user at the right time.
Answer: TRUE
Learning Objective: 1.5: Briefly understand the history and evolution of business intelligence–a precursor to analytics/AI.

22) Traditional BI systems use a large volume of static data that has been extracted, cleansed, and loaded into a data warehouse to produce reports and analyses.
Answer: TRUE
Learning Objective: 1.5: Briefly understand the history and evolution of business intelligence–a precursor to analytics/AI.

23) Demands for instant, on-demand access to dispersed information decrease as firms successfully integrate BI into their operations.
Answer: FALSE
Learning Objective: 1.5: Briefly understand the history and evolution of business intelligence–a precursor to analytics/AI.

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24) A BI framework integrates multiple data sources to provide a unified and consistent view of business information.
Answer: TRUE
Learning Objective: 1.5: Briefly understand the history and evolution of business intelligence–a precursor to analytics/AI.

25) Middleware is the component responsible for data visualization and dashboard creation.
Answer: FALSE
Learning Objective: 1.5: Briefly understand the history and evolution of business intelligence–a precursor to analytics/AI.

26) Cloud-based BI solutions allow scalability and accessibility across organizational units.
Answer: TRUE
Learning Objective: 1.5: Briefly understand the history and evolution of business intelligence–a precursor to analytics/AI.

27) Online transaction processing (OLTP) systems handle a company's routine, ongoing business transactions.
Answer: TRUE
Learning Objective: 1.5: Briefly understand the history and evolution of business intelligence–a precursor to analytics/AI.

28) Data warehouses are intended to work with informational data used for online analytical processing (OLAP) systems.
Answer: TRUE
Learning Objective: 1.5: Briefly understand the history and evolution of business intelligence–a precursor to analytics/AI.

29) The design of OLTP systems makes them ideal for analytical queries and ad hoc reporting.
Answer: FALSE
Learning Objective: 1.5: Briefly understand the history and evolution of business intelligence–a precursor to analytics/AI.

30) The user interface of a BI system is often referred to as a dashboard.
Answer: TRUE
Learning Objective: 1.5: Briefly understand the history and evolution of business intelligence–a precursor to analytics/AI.

31) The use of dashboards and data visualizations is often very effective in identifying issues and opportunities in organizations.
Answer: TRUE
Learning Objective: 1.5: Briefly understand the history and evolution of business intelligence–a precursor to analytics/AI.

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32) Of all analytics types (i.e., descriptive, predictive, and prescriptive), data mining is most closely related to predictive analytics.
Answer: TRUE
Learning Objective: 1.6: Learn about three types of analytics.

33) The goal of prescriptive analytics is to use data and machine learning tools to forecast the future values of the variables of interest.
Answer: FALSE
Learning Objective: 1.6: Learn about three types of analytics.

34) Descriptive analytics is often called reporting analytics with the goal of answering the question of "what will happen?"
Answer: FALSE
Learning Objective: 1.6: Learn about three types of analytics.

35) Business analytics continuum starts with predictive analytics, continues with descriptive analytics and ends with prescriptive analytics.
Answer: FALSE
Learning Objective: 1.6: Learn about three types of analytics.

36) In the Opening Vignette on Sports Analytics, what was adjusted to drive one-time ticket sales?
A) Player selections
B) Stadium location
C) Fan tweets
D) Ticket prices
Answer: D
Learning Objective: 1.1: Get introduced to the idea of analytics through understanding applications in sports.

37) In the examples of Sports Analytics, what type of modeling was used to predict offensive tactics for American football?
A) Heuristics
B) Heat maps
C) Cascaded decision trees
D) Sentiment analysis
Answer: B
Learning Objective: 1.1: Get introduced to the idea of analytics through understanding applications in sports.

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38) Computer applications have moved from transaction processing and monitoring to other activities. Which of the following is not one of those activities?
A) Problem analysis
B) Solution applications
C) Data monitoring
D) Cloud-based technologies
Answer: C
Learning Objective: 1.2: Understand the evolution of computer-based support for decision making.

39) Which of the following developments is not contributing to facilitating growth of decision support and analytics?
A) Collaboration technologies
B) Data management
C) Knowledge management
D) Locally concentrated workforces
Answer: D
Learning Objective: 1.2: Understand the evolution of computer-based support for decision making.

40) What is the primary function of a data warehouse within BI?
A) To store raw, unprocessed transaction data only.
B) To integrate and manage data for analytical processing.
C) To run real-time transaction systems.
D) To visualize performance metrics.
Answer: B
Learning Objective: 1.2: Understand the evolution of computer-based support for decision making.

41) What advantage do cloud-based analytics tools provide over traditional BI systems?
A) Reduced data access speed
B) Limited user scalability
C) Cost efficiency and accessibility
D) Dependence on mainframe systems
Answer: C
Learning Objective: 1.2: Understand the evolution of computer-based support for decision making.

42) Which development made real-time and large-scale analytics feasible for most organizations?
A) Expert systems
B) Cloud computing and distributed storage
C) Manual data entry systems
D) Static data reporting
Answer: B
Learning Objective: 1.2: Understand the evolution of computer-based support for decision making.

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43) Software instances referred to as _____ can be placed on a separate server in the network and use event- and process-based approaches to measure and monitor operational processes.
A) Subroutines
B) Processors
C) CPUs
D) Intelligent agents
Answer: D
Learning Objective: 1.2: Understand the evolution of computer-based support for decision making.

44) Which of the following is not a phase in human decision-making process?
A) Intelligence
B) Design
C) Analytics
D) Choice
Answer: C
Learning Objective: 1.3: Understand the basic phases of decision making so as to appreciate the need for technologies for supporting decision making.

45) Which of the following is a part of the design phase of the human decision-making process?
A) Formulate a model
B) Search and scan the procedures
C) Collect data
D) Identify the problem
Answer: C
Learning Objective: 1.3: Understand the basic phases of decision making so as to appreciate the need for technologies for supporting decision making.

46) Which of the following is not among the data collection issues in the decision-making process?
A) Obtaining data may be expensive
B) Data may be highly structured
C) Data may be insecure
D) Data may not be accurate or precise enough
Answer: B
Learning Objective: 1.3: Understand the basic phases of decision making so as to appreciate the need for technologies for supporting decision making.

47) Which one of the following is the best definition of a model?
A) Model is the exact replica of the reality
B) Model is the opposite of reality
C) Model is the abstraction of reality
D) Model is the reality
Answer: C
Learning Objective: 1.3: Understand the basic phases of decision making so as to appreciate the need for technologies for supporting decision making.

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48) In what decade did separate information systems within the organizations begin to be integrated?
A) 1970s
B) 1980s
C) 1990s
D) 2000s
Answer: B
Learning Objective: 1.4: Learn how basic computerized decision support has evolved to include analytics/data science/AI.

49) Relational databases began to be used in which of the following time windows?
A) 1960s
B) 1970s
C) 1980s
D) 1990s
Answer: C
Learning Objective: 1.4: Learn how basic computerized decision support has evolved to include analytics/data science/AI.

50) To address the need for more versatile reporting than what was available in 1980s era, ERP led to the development of what type of system?
A) Management information systems
B) Relational databases
C) Executive information systems
D) Data warehouses
Answer: C
Learning Objective: 1.4: Learn how basic computerized decision support has evolved to include analytics/data science/AI.

51) What is the main benefit of integrating multiple data sources into a BI system?
A) Reducing data quality
B) Achieving a single version of the truth
C) Limiting system access
D) Simplifying transaction processing
Answer: B
Learning Objective: 1.4: Learn how basic computerized decision support has evolved to include analytics/data science/AI.

52) What component connects data storage systems with analytical and reporting tools in a BI framework?
A) Middleware
B) Data warehouse
C) Dashboard
D) OLAP cube
Answer: A
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53) What is the primary purpose of BI dashboards and scorecards?
A) Display real-time KPIs and performance trends
B) Store operational data
C) Replace data warehouses
D) Manage transaction data
Answer: A
Learning Objective: 1.4: Learn how basic computerized decision support has evolved to include analytics/data science/AI.

54) Which one of the following technologies is not directly related to Big Data?
A) Spark
B) Hadoop
C) MapReduce
D) OLAP
Answer: D
Learning Objective: 1.4: Learn how basic computerized decision support has evolved to include analytics/data science/AI.

55) Which one of the following technologies was developed after the business intelligence era?
A) Big data analytics
B) Enterprise resource planning
C) Relational database management systems
D) Data warehousing
Answer: A
Learning Objective: 1.4: Learn how basic computerized decision support has evolved to include analytics/data science/AI.

56) _____ providers focus on bringing all the data stores into an enterprise-wide platform.
A) Data mining
B) Simulation modeling
C) Hardware design
D) Middleware
Answer: D
Learning Objective: 1.4: Learn how basic computerized decision support has evolved to include analytics/data science/AI.

57) With _____, all the data from every corner of the enterprise is collected and integrated into a consistent schema so that every part of the organization has access to the single version of the truth when and where needed.
A) Analytics
B) ERP
C) CRM
D) Data warehouse
Answer: B
Learning Objective: 1.4: Learn how basic computerized decision support has evolved to include analytics/data science/AI.

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58) Which of the following is an umbrella term that combines architectures, tools, databases, analytical tools, applications, and methodologies?
A) MIS
B) DSS
C) ERP
D) BI
Answer: D
Learning Objective: 1.5: Briefly understand the history and evolution of business intelligence–a precursor to analytics/AI.

59) The competitive imperatives for BI include all of the following, except?
A) Right information
B) Right user
C) Right time
D) Right place
Answer: B
Learning Objective: 1.5: Briefly understand the history and evolution of business intelligence–a precursor to analytics/AI.

60) Which of the following is not an example of transaction processing?
A) ATM withdrawal
B) Bank deposit
C) Sales report
D) Cash register scans
Answer: C
Learning Objective: 1.5: Briefly understand the history and evolution of business intelligence–a precursor to analytics/AI.

61) Online transaction processing (OLTP) systems handle a company's routine ongoing business. In contrast, a data warehouse is typically used as:
A) The end result of BI processes and operations
B) A repository of actionable intelligence obtained from a data mart
C) A distinct system that provides storage for data that will be made use of in analysis
D) An integral subsystem of an online business transaction recording system
Answer: C
Learning Objective: 1.5: Briefly understand the history and evolution of business intelligence–a precursor to analytics/AI.

62) The very design that makes an OLTP system efficient for transaction processing makes it inefficient for what?
A) End-user generated ad hoc reports, queries, and analysis
B) Transaction processing systems that constantly update operational databases
C) The collection of reliable sources of intelligence
D) Transactions such as ATM withdrawals and updating of the account balance
Answer: A
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63) How are enterprise resources planning (ERP) systems related to supply chain management systems?
A) Different terms for the same system
B) Complementary systems
C) Mutually exclusive systems
D) None of the above; these systems never interface
Answer: B
Learning Objective: 1.5: Briefly understand the history and evolution of business intelligence–a precursor to analytics/AI.

64) Which of the following is not among the systems with which BI applications are not usually integrated?
A) Databases
B) Legacy systems
C) Enterprise systems
D) Deep learning systems
Answer: D
Learning Objective: 1.5: Briefly understand the history and evolution of business intelligence–a precursor to analytics/AI.

65) Which BI framework component focuses on monitoring and analyzing key business metrics?
A) Data warehouse
B) Business analytics
C) Business performance management
D) Middleware
Answer: C
Learning Objective: 1.5: Briefly understand the history and evolution of business intelligence–a precursor to analytics/AI.

66) What has caused the growth of the demand for instant, on-demand access to dispersed information?
A) The increasing divide between users who focus on the strategic level and those who are more oriented to the tactical level
B) The need to create a database infrastructure that is always online and contains all the information from the OLTP systems
C) The more pressing need to close the gap between the operational data and strategic objectives
D) The fact that BI cannot simply be a technical exercise for the information systems department
Answer: C
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67) Today, many vendors offer diverse tools, some of which are completely preprogrammed (called shells). How are these shells utilized?
A) They are used for customization of BI solutions
B) All a user needs to do is insert the information and data
C) The shell provides a secure environment for the organization's BI data
D) They host an enterprise data warehouse that can assist in decision making
Answer: B
Learning Objective: 1.5: Briefly understand the history and evolution of business intelligence–a precursor to analytics/AI.

68) Which one of the following technologies was developed prior to the business intelligence era?
A) Enterprise resource planning
B) Relational database management systems
C) Data warehousing
D) All of the other answers are TRUE
Answer: D
Learning Objective: 1.5: Briefly understand the history and evolution of business intelligence–a precursor to analytics/AI.

69) Fundamental reasons for investing in BI must be _____ with the company's business strategy.
A) Preceded
B) Contradicted
C) Competed
D) Aligned
Answer: D
Learning Objective: 1.5: Briefly understand the history and evolution of business intelligence–a precursor to analytics/AI.

70) Organizations using BI systems are typically seeking to close the _____ between the operational data and strategic objectives has become more pressing.
A) Contract
B) Deal
C) Gap
D) Agents
Answer: C
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71) _____ is an umbrella term that combines architectures, tools, databases, analytical tools, applications, and methodologies.
A) ERP
B) Business intelligence
C) Prescriptive analytics
D) Social media
Answer: B
Learning Objective: 1.5: Briefly understand the history and evolution of business intelligence–a precursor to analytics/AI.

72) A(n) _____ is a major component of a Business Intelligence system that holds source data.
A) ERP
B) OLTP
C) Software agent
D) Data warehouse
Answer: D
Learning Objective: 1.5: Briefly understand the history and evolution of business intelligence–a precursor to analytics/AI.

73) A(n) _____ is a major component of a Business Intelligence system that is often browser based and often presents a portal or dashboard.
A) Data warehouse
B) OLTP
C) User interface
D) ERP
Answer: C
Learning Objective: 1.5: Briefly understand the history and evolution of business intelligence–a precursor to analytics/AI.

74) Business _____ are now extremely compressed, faster, and more informed across industries.
A) Problems
B) Challenges
C) Structures
D) Cycle times
Answer: D
Learning Objective: 1.5: Briefly understand the history and evolution of business intelligence–a precursor to analytics/AI.

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75) The user interface of a BI system is often referred to as a:
A) CRM
B) Simulation
C) Dashboard
D) Middleware
Answer: C
Learning Objective: 1.5: Briefly understand the history and evolution of business intelligence–a precursor to analytics/AI.

76) Data warehouses are intended to work with informational data used for online _____ processing systems.
A) Analytical
B) Transactional
C) Media
D) Middleware
Answer: A
Learning Objective: 1.5: Briefly understand the history and evolution of business intelligence–a precursor to analytics/AI.

77) As the number of potential BI applications increases, the need to justify and prioritize them arises. This is not an easy task due to the large number of _____ benefits.
A) Analytics
B) Quantitative
C) CRM
D) Intangible
Answer: D
Learning Objective: 1.5: Briefly understand the history and evolution of business intelligence–a precursor to analytics/AI.

78) What type of analytics is used to make decisions to achieve the best performance possible?
A) Descriptive
B) Prescriptive
C) Predictive
D) Domain
Answer: B
Learning Objective: 1.6: Learn about three types of analytics.

79) What type of analytics seeks to determine what is likely to happen in the future?
A) Descriptive
B) Prescriptive
C) Predictive
D) Domain
Answer: C
Learning Objective: 1.6: Learn about three types of analytics.

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80) Which one of the following is not among the data engineering challenges?
A) No real-time access
B) High volumes of data
C) Lack of data governance
D) No clear boundaries in the data flows
Answer: B
Learning Objective: 1.6: Learn about three types of analytics.

81) The analytics type that provides estimation of the future values of variables of interest is often called _____ analytics.
A) Descriptive
B) Predictive
C) Social
D) Automated
Answer: B
Learning Objective: 1.6: Learn about three types of analytics.

82) _____ is among the key enablers of prescriptive analytics.
A) Data mining
B) Simulation
C) Data warehousing
D) RDBM
Answer: B
Learning Objective: 1.6: Learn about three types of analytics.

83) _____ analytics help managers understand what happened and help them identify problems and opportunities.
A) Descriptive
B) Social
C) Predictive
D) Associative
Answer: A
Learning Objective: 1.6: Learn about three types of analytics.

84) Accurate projections of future events and outcomes are the expected results of _____ analytics.
A) Descriptive
B) Social
C) Predictive
D) Prescriptive
Answer: C
Learning Objective: 1.6: Learn about three types of analytics.

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85) Well-defined business problems and opportunities are the outcome of _____ analytics.
A) Descriptive
B) Social
C) Predictive
D) Prescriptive
Answer: A
Learning Objective: 1.6: Learn about three types of analytics.

86) Predicting whether the customer is likely to switch to a competitor is often called _____ analysis.
A) Competitive
B) Collaborative
C) Social
D) Churn
Answer: D
Learning Objective: 1.6: Learn about three types of analytics.

87) Which of the following is not among the layers in the PANDA platform?
A) Visual
B) Transactional
C) Analytical
D) Collaborative
Answer: D
Learning Objective: 1.6: Learn about three types of analytics.

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