***Modern Database Management, 13e* (Hoffer)**
Chapter 7 Databases in Applications

1) Which of the following is a component of processing logic?
A) Input
B) Output
C) Retrieval
D) Business rules
Answer: D
LO: 7.2: Explain the three components of client/server systems: data presentation services, processing services, and storage services.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

2) A client PC that is responsible for processing presentation logic, extensive application and business rules logic, as well as many DBMS functions is called a:
A) file server.
B) file processor.
C) database server.
D) fat client.
Answer: D
LO: 7.2: Explain the three components of client/server systems: data presentation services, processing services, and storage services.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

3) _____ is the process of assigning pieces of application code to clients or servers.
A) Application partitioning
B) Modularizing programs
C) Code distribution
D) Program breakup
Answer: A
LO: 7.2: Explain the three components of client/server systems: data presentation services, processing services, and storage services.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

4) The client/server architectures that have evolved can be distinguished by the distribution of _____ across clients and servers.
A) memory
B) files
C) application logic components
D) query logic components
Answer: C
LO: 7.2: Explain the three components of client/server systems: data presentation services, processing services, and storage services.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

5) Which of the following is NOT a common distribution logic for two-tiered server environments?
A) Fat client
B) Tall client
C) Thin client
D) Distributed
Answer: B
LO: 7.3: Distinguish between two-tier and three-tier architectures.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

6) _____ is/are any of several classes of software that allow an application to interoperate with other software without requiring the user to understand all software involved.
A) User interface enhancers
B) Middleware
C) Interface managers
D) MPP
Answer: B
LO: 7.3: Distinguish between two-tier and three-tier architectures.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

7) A client PC that is responsible for processing presentation logic, extensive application and business rules logic, and many DBMS functions is called a(n):
A) server.
B) fat client.
C) thin client.
D) workstation.
Answer: B
LO: 7.3: Distinguish between two-tier and three-tier architectures.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

8) A PC configured to handle user interfaces with limited local storage is called a(n):
A) fat client.
B) thin client.
C) light client.
D) overweight client.
Answer: B
LO: 7.3: Distinguish between two-tier and three-tier architectures.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

9) A(n) _____ is a set of application routines that programs use to direct the performance of procedures by the computer's operating system.
A) API
B) MOM
C) RPC
D) LAN
Answer: A
LO: 7.3: Distinguish between two-tier and three-tier architectures.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

10) A computer that provides database storage and access in a client/server environment is called a(n):
A) database server.
B) file server.
C) cloud data store.
D) info server.
Answer: A
LO: 7.3: Distinguish between two-tier and three-tier architectures.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

11) All of the following are key components of a web application EXCEPT:
A) database server.
B) web server.
C) processing-logic server.
D) web browser.
Answer: C
LO: 7.4: Describe the key components of a Web application and the information flow between the various components.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

12) An application server
A) provides basic functionality for receiving and responding to requests from browsers.
B) provides the building blocks for creating dynamic web sites and web-based applications.
C) provides storage logic.
D) none of the above.
Answer: B
LO: 7.4: Describe the key components of a Web application and the information flow between the various components.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

13) The LAMP stack consists of all of the following EXCEPT:
A) Apache.
B) MySQL.
C) PHP or Python.
D) IIS.
Answer: D
LO: 7.4: Describe the key components of a Web application and the information flow between the various components.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

14) Which of the following is not a basic step to accessing a database from an application:
A) register database driver.
B) open a connection.
C) define physical storage.
D) query the database.
Answer: C
LO: 7.5: Describe how to connect to databases in a three-tier application using Java (JSP) and Python.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

15) A mechanism in a ResultSet object in Java that points to the current row of data is called a:
A) stored procedure.
B) trigger.
C) table.
D) cursor.
Answer: D
LO: 7.5: Describe how to connect to databases in a three-tier application using Java (JSP) and Python.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

16) Which Java method retrieves the next row of a cursor?
A) next()
B) first()
C) get()
D) load()
Answer: A
LO: 7.5: Describe how to connect to databases in a three-tier application using Java (JSP) and Python.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

17) One major disadvantage of JSP is:
A) it runs slow.
B) HTML, Java cod,e and SQL code are mixed together.
C) it is not popular.
D) it does not use XML.
Answer: B
LO: 7.5: Describe how to connect to databases in a three-tier application using Java (JSP) and Python.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

18) The architecture that most applications use that separates the business logic, presentation logic, and database logic is called:
A) model-value-controller.
B) model-view-controller.
C) JSP.
D) frameworks.
Answer: B
LO: 7.5: Describe how to connect to databases in a three-tier application using Java (JSP) and Python.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

19) Many Python web applications use:
A) iPython.
B) Django.
C) jQuery.
D) stored procedures.
Answer: B
LO: 7.5: Describe how to connect to databases in a three-tier application using Java (JSP) and Python.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

20) A data-interchange format easily for humans to read and machines to parse and process is called:
A) Java Oriented Notation (JON).
B) HTML.
C) XML.
D) JavaScript Object Notation (JSON).
Answer: D
LO: 7.5: Describe how to connect to databases in a three-tier application using Java (JSP) and Python.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

21) How the database results are read into memory is determined by:
A) the program.
B) the database driver.
C) the operating system.
D) none of the above.
Answer: B
LO: 7.5: Describe how to connect to databases in a three-tier application using Java (JSP) and Python.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

22) All of the following are advantages of stored procedures EXCEPT:
A) performance improves for compiled SQL statements.
B) network traffic deceases.
C) portability.
D) thinner client.
Answer: C
LO: 7.6: Understand the notion of transaction integrity.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

23) A sequence of steps that constitute a well-defined business activity is called a:
A) transaction.
B) transfixture.
C) database.
D) table.
Answer: A
LO: 7.6: Understand the notion of transaction integrity.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

24) A business transaction requires:
A) a trigger.
B) a stored procedure.
C) several actions against the database.
D) human intervention.
Answer: C
LO: 7.6: Understand the notion of transaction integrity.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

25) All of the following are well-accepted characteristics of transactions EXCEPT:
A) Atomicity.
B) Consistency.
C) Persistence.
D) Durability.
Answer: C
LO: 7.6: Understand the notion of transaction integrity.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

26) In order for a transaction to be consistent:
A) it must run the same way all the time.
B) it must tell the truth.
C) it must run using the same amount of memory.
D) any database constraints that must be true before the transaction must also be true after the transaction.
Answer: D
LO: 7.6: Understand the notion of transaction integrity.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

27) A transaction is considered isolated when:
A) it runs in a vacuum.
B) any changes in the database are not revealed to the user until the transaction is complete.
C) it can only be run on one server.
D) users can see changes to tables before the transaction is complete.
Answer: B
LO: 7.6: Understand the notion of transaction integrity.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

28) Durability means that:
A) transactions can't be erased.
B) once a transaction is committed, no subsequent failure of the database can reverse the effect of the transaction.
C) transactions can withstand failure.
D) transactions never finish on time.
Answer: B
LO: 7.6: Understand the notion of transaction integrity.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

29) The actions that must be taken to ensure data integrity is maintained during multiple simultaneous transactions are called _____ actions.
A) logging
B) concurrency control
C) transaction authorization
D) multiple management
Answer: B
LO: 7.7: Compare optimistic and pessimistic systems of concurrency control.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

30) The extent of the database resource that is included with each lock is called the level of:
A) impact.
B) management.
C) lock granularity.
D) TIO.
Answer: C
LO: 7.7: Compare optimistic and pessimistic systems of concurrency control.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

31) A(n) _____ prevents another transaction from reading and therefore updating a record until it is unlocked.
A) record controller
B) exclusive lock
C) authorization rule
D) shared lock
Answer: B
LO: 7.7: Compare optimistic and pessimistic systems of concurrency control.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

32) A(n) _____ is a procedure for acquiring the necessary locks for a transaction where all necessary locks are acquired before any are released.
A) record controller
B) exclusive lock
C) authorization rule
D) two-phase lock
Answer: D
LO: 7.7: Compare optimistic and pessimistic systems of concurrency control.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

33) An optimistic approach to concurrency control is called:
A) versioning.
B) denormalization.
C) deadlock resolution.
D) HappyControl.
Answer: A
LO: 7.7: Compare optimistic and pessimistic systems of concurrency control.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

34) Which of the following threats involves outside parties using information to embarrass a company?
A) Accidental loss
B) Theft and fraud
C) Loss of confidentiality
D) Loss of data integrity
Answer: C
LO: 7.8: Understand the basics of application security.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

35) The role that is responsible for developing overall policies and procedures for database security is:
A) Data Administration.
B) Database Administration.
C) Database Development.
D) Accounting.
Answer: A
LO: 7.8: Understand the basics of application security.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

36) The role responsible for administering database security is:
A) Data Administration.
B) Database Administration.
C) Security.
D) Developers.
Answer: B
LO: 7.8: Understand the basics of application security.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

37) A common encryption method to secure data traveling between a client and a server is called:
A) Secure Sockets Layer (SSL).
B) Secure Synchronization Layer (SSL).
C) RSA.
D) ITT.
Answer: A
LO: 7.8: Understand the basics of application security.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

38) All of the following are additional methods of Web security EXCEPT:
A) restrict the number of users on the Web server.
B) restrict access to the Web server.
C) remove unneeded programs.
D) blacklist bad users.
Answer: D
LO: 7.8: Understand the basics of application security.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

39) Which of the following is a type of network security?
A) Authentication of the client workstation
B) Password naming conventions
C) Guidelines for frequency of password changes
D) Random password guessing
Answer: A
LO: 7.8: Understand the basics of application security.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

40) Security measures for dynamic Web pages are different from static HTML pages because:
A) dynamic Web pages are built "on the fly."
B) static Web pages contain more sensitive data.
C) the connection requires full access to the database for dynamic pages.
D) HTML is more complex than dynamic Web pages.
Answer: C
LO: 7.8: Understand the basics of application security.
Difficulty: Difficult
Classification: Concept
AACSB: Information Technology

41) The W3C standard for Web privacy is called:
A) the Web privacy act.
B) Platform for Privacy Preferences.
C) Freedom of Web Information Act.
D) the Magna Carta.
Answer: B
LO: 7.8: Understand the basics of application security.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

42) Client/server describes a networked computing model that distributes processes between computers that request services and computers that provide services.
Answer: TRUE
LO: 7.2: Explain the three components of client/server systems: data presentation services, processing services, and storage services.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

43) Geolocation logic is the application logic component responsible for data storage and retrieval.
Answer: FALSE
LO: 7.2: Explain the three components of client/server systems: data presentation services, processing services, and storage services.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

44) A client PC that is responsible for presentation logic, application logic, and many DBMS functions is called a fat client.
Answer: TRUE
LO: 7.2: Explain the three components of client/server systems: data presentation services, processing services, and storage services.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

45) The presentation logic component of a client/server system is responsible for formatting and presenting data on the user's screen.
Answer: TRUE
LO: 7.2: Explain the three components of client/server systems: data presentation services, processing services, and storage services.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

46) Business rules logic includes such activities as data validation and identification of processing errors.
Answer: FALSE
LO: 7.2: Explain the three components of client/server systems: data presentation services, processing services, and storage services.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

47) The storage component of a client/server architecture is responsible for data storage and retrieval from the physical storage devices associated with the application.
Answer: TRUE
LO: 7.2: Explain the three components of client/server systems: data presentation services, processing services, and storage services.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

48) A fat client does most of its processing on the server.
Answer: FALSE
LO: 7.2: Explain the three components of client/server systems: data presentation services, processing services, and storage services.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

49) Application partitioning gives developers the opportunity to write application code that can later be placed on either a client workstation or a server, depending upon which location will give the best performance.
Answer: TRUE
LO: 7.2: Explain the three components of client/server systems: data presentation services, processing services, and storage services.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

50) When developing an application, one must decide where it will be placed when it is developed.
Answer: FALSE
LO: 7.2: Explain the three components of client/server systems: data presentation services, processing services, and storage services.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

51) The process of assigning parts of an application to a client or server is called application partitioning.
Answer: FALSE
LO: 7.2: Explain the three components of client/server systems: data presentation services, processing services, and storage services.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

52) An API is a set of routines that a database server uses to access database objects.
Answer: FALSE
LO: 7.3: Distinguish between two-tier and three-tier architectures.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

53) ODBC is an application programming interface that provides a common language for application programs to access and process an SQL database independent of the particular RDBMS that is accessed.
Answer: TRUE
LO: 7.3: Distinguish between two-tier and three-tier architectures.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

54) In some three-tier architectures, most application code is stored on the application server.
Answer: TRUE
LO: 7.3: Distinguish between two-tier and three-tier architectures.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

55) Java servlets execute from within another program and reside on the server.
Answer: TRUE
LO: 7.3: Distinguish between two-tier and three-tier architectures.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

56) Two-tier architectures are much more scalable than three-tier architectures.
Answer: FALSE
LO: 7.3: Distinguish between two-tier and three-tier architectures.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

57) A client/server configuration that has three layers (one client and two servers) has a three-tier architecture.
Answer: TRUE
LO: 7.3: Distinguish between two-tier and three-tier architectures.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

58) Three-tier architectures generally result in higher long-term costs.
Answer: FALSE
LO: 7.3: Distinguish between two-tier and three-tier architectures.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

59) A web server is a key component of web applications.
Answer: TRUE
LO: 7.4: Describe the key components of a Web application and the information flow between the various components.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

60) An application server provides basic functionality for receiving and responding to requests from browsers.
Answer: FALSE
LO: 7.4: Describe the key components of a Web application and the information flow between the various components.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

61) The LAMP stack consists of Apache, PHP and MySQL.
Answer: TRUE
LO: 7.4: Describe the key components of a Web application and the information flow between the various components.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

62) Storage logic is provided by an application server.
Answer: FALSE
LO: 7.4: Describe the key components of a Web application and the information flow between the various components.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

63) Open Database Connectivity is an application programming interface that provides a common language for application programs to access and process SQL databases independent of the particular RDBMS that is accessed.
Answer: TRUE
LO: 7.5: Describe how to connect to databases in a three-tier application using Java (JSP) and Python.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

64) All .html files can be processed by the web server itself.
Answer: TRUE
LO: 7.4: Describe the key components of a Web application and the information flow between the various components.
Difficulty: Difficult
Classification: Concept
AACSB: Information Technology

65) A database is a sequence of steps that constitute a well-defined business activity.
Answer: FALSE
LO: 7.6: Understand the notion of transaction integrity.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

66) A business transaction requires several actions against a database.
Answer: TRUE
LO: 7.6: Understand the notion of transaction integrity.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

67) All transactions must have the ACID characteristics.
Answer: TRUE
LO: 7.6: Understand the notion of transaction integrity.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

68) A transaction is consistent if it always runs with the same amount of memory.
Answer: FALSE
LO: 7.6: Understand the notion of transaction integrity.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

69) When changes to the database that a transaction imposes are not revealed to the user until the transaction is completed then it is considered isolated.
Answer: TRUE
LO: 7.6: Understand the notion of transaction integrity.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

70) A transaction is durable if it can resist failure.
Answer: FALSE
LO: 7.6: Understand the notion of transaction integrity.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

71) During multiple simultaneous transactions data integrity is maintained by logging.
Answer: FALSE
LO: 7.7: Compare optimistic and pessimistic systems of concurrency control.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

72) Level of lock granularity is the extent of a database resource include with each lock.
Answer: TRUE
LO: 7.7: Compare optimistic and pessimistic systems of concurrency control.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

73) A shared lock prevents another transaction from reading a record.
Answer: FALSE
LO: 7.7: Compare optimistic and pessimistic systems of concurrency control.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

74) Two-phase locking is a procedure for acquiring locks for a transaction before any are released.
Answer: TRUE
LO: 7.7: Compare optimistic and pessimistic systems of concurrency control.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

75) Versioning is a pessimistic approach to concurrency control.
Answer: FALSE
LO: 7.7: Compare optimistic and pessimistic systems of concurrency control.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

76) Loss of confidentiality is a threat that involves outside parties using information to embarrass a company.
Answer: TRUE
LO: 7.8: Understand the basics of application security.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

77) Loss of data integrity means that someone has stolen data from the database server.
Answer: FALSE
LO: 7.8: Understand the basics of application security.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

78) Database administrators are responsible for developing overall policies and procedures for database security.
Answer: FALSE
LO: 7.8: Understand the basics of application security.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

79) Database administrators are responsible for administering database security.
Answer: TRUE
LO: 7.8: Understand the basics of application security.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

80) ABET is a common encryption method used to secure data traveling between a client and a server.
Answer: FALSE
LO: 7.8: Understand the basics of application security.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

81) Restricting access to the Web server is one method of Web security.
Answer: TRUE
LO: 7.8: Understand the basics of application security.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

82) Random password guessing is a type of network security.
Answer: FALSE
LO: 7.8: Understand the basics of application security.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

83) Since dynamic Web pages require full access to the database, security is different from static HTML pages.
Answer: TRUE
LO: 7.8: Understand the basics of application security.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

84) The Magna Carta is the W3C standard for Web privacy.
Answer: FALSE
LO: 7.8: Understand the basics of application security.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

Modern Database Management, 13e **(Hoffer)**
Chapter 8 Physical Database Design and Database Infrastructure

1) A requirement to begin designing physical files and databases is:
A) normalized relations.
B) physical tables created.
C) implementation complete.
D) all datatypes determined.
Answer: A
LO: 8.2: Describe the physical database design process, its objectives, and its deliverables.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

2) A key decision in the physical design process is:
A) ignoring the size of the database.
B) selecting structures.

C) deciding on the monitor.
D) deciding the e-r diagrams.
Answer: B
LO: 8.2: Describe the physical database design process, its objectives, and its deliverables.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

3) Designing physical files requires _____ of where and when data are used in various ways.
A) maps
B) descriptions
C) keys
D) hints
Answer: B
LO: 8.2: Describe the physical database design process, its objectives, and its deliverables.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

4) Database access frequencies are estimated from:
A) transaction volumes.
B) user logins.
C) security violations.
D) random number generation.
Answer: A
LO: 8.2: Describe the physical database design process, its objectives, and its deliverables.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

5) A detailed coding scheme recognized by system software for representing organizational data is called a(n):
A) DBMS code.
B) data type.
C) SQL.
D) DB layout.
Answer: B
LO: 8.2: Describe the physical database design process, its objectives, and its deliverables.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

6) All of the following are objectives when selecting a data type EXCEPT:
A) represent all possible values.
B) improve data integrity.
C) support all data manipulations.
D) use a lot of storage space.

Answer: D
LO: 8.2: Describe the physical database design process, its objectives, and its deliverables.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

7) All of the following are valid datatypes in Oracle 12c EXCEPT:
A) VARCHAR2.
B) BOOLEAN.
C) BLOB.
D) NUMBER.
Answer: B
LO: 8.2: Describe the physical database design process, its objectives, and its deliverables.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

8) The smallest unit of application data recognized by system software is a:
A) field.
B) row.
C) data type.
D) column.
Answer: A
LO: 8.2: Describe the physical database design process, its objectives, and its deliverables.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

9) An appropriate datatype for one wanting a fixed-length type for last name would include:
A) VARCHAR.
B) CHAR.
C) BLOB.
D) DATE.
Answer: B
LO: 8.2: Describe the physical database design process, its objectives, and its deliverables.
Difficulty: Moderate
Classification: Application
AACSB: Information Technology

10) An appropriate datatype for adding a sound clip would be:
A) VARCHAR.
B) CHAR.
C) BLOB.
D) DATE.
Answer: C
LO: 8.2: Describe the physical database design process, its objectives, and its deliverables.
Difficulty: Moderate
Classification: Application
AACSB: Information Technology

11) Which of the following is an objective of selecting a data type?
A) Represent a small number of possible values
B) Maximize storage space
C) Limit security
D) Improve data integrity
Answer: D
LO: 8.2: Describe the physical database design process, its objectives, and its deliverables.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

12) In which data model would a code table appear?
A) Conceptual
B) Logical
C) Physical
D) Data layout
Answer: C
LO: 8.2: Describe the physical database design process, its objectives, and its deliverables.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

13) An integrity control supported by a DBMS is:
A) substitute estimates.
B) security.
C) range control.
D) GUI guards.
Answer: C
LO: 8.2: Describe the physical database design process, its objectives, and its deliverables.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

14) The value a field will assume unless the user enters an explicit value for an instance of that field is called a:
A) default value.
B) null value.
C) range control.
D) gurand.
Answer: A
LO: 8.2: Describe the physical database design process, its objectives, and its deliverables.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

15) A method for handling missing data is to:
A) substitute with random numbers for the missing data.
B) track missing data with special reports.
C) perform insensitivity testing.
D) delete the associated row.
Answer: B
LO: 8.2: Describe the physical database design process, its objectives, and its deliverables.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

16) Sensitivity testing involves:
A) checking to see if your teeth hurt when you brush.
B) seeing how accurate data are.
C) checking to see if missing data will greatly impact results.
D) deleting the associated row.
Answer: C
LO: 8.2: Describe the physical database design process, its objectives, and its deliverables.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

17) The storage format for each attribute from the logical data model is chosen to maximize _____ and minimize storage space.
A) query design
B) programmer productivity
C) data integrity
D) data integration
Answer: C
LO: 8.3: Choose storage formats for attributes from a logical data model.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

18) Within Oracle, the named set of storage elements in which physical files for database tables may be stored is called a(n):
A) extent.
B) table.
C) tablespace.
D) partition.
Answer: C
LO: 8.3: Choose storage formats for attributes from a logical data model.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

19) While Oracle has responsibility for managing data inside a tablespace, the tablespace, as a whole, is managed by the:
A) user.
B) CEO.
C) XML.
D) operating system.
Answer: D
LO: 8.3: Choose storage formats for attributes from a logical data model.
Difficulty: Difficult
Classification: Concept
AACSB: Information Technology

20) A contiguous section of disk storage space is called a(n):
A) track.
B) sector.
C) extent.
D) tablespace.
Answer: C
LO: 8.3: Choose storage formats for attributes from a logical data model.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

21) A method to allow adjacent secondary memory space to contain rows from several tables is called:
A) cluttering.
B) clustering.
C) concatenating.
D) compiling.
Answer: B
LO: 8.3: Choose storage formats for attributes from a logical data model.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

22) A(n) _____ is a field of data used to locate a related field or record.
A) key
B) index
C) lock
D) pointer
Answer: D
LO: 8.4: Select an appropriate file organization by balancing various important design factors.
Difficulty: Difficult
Classification: Concept
AACSB: Information Technology

23) A(n) _____ is a technique for physically arranging the records of a file on secondary storage devices.
A) physical pointer
B) retrieval program
C) file organization
D) update program
Answer: C
LO: 8.4: Select an appropriate file organization by balancing various important design factors.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

24) Which type of file is most efficient with storage space?
A) Sequential
B) Hashed
C) Indexed
D) Clustered
Answer: A
LO: 8.4: Select an appropriate file organization by balancing various important design factors.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

25) Which type of file is easiest to update?
A) Sequential
B) Hashed
C) Indexed
D) Clustered
Answer: B
LO: 8.4: Select an appropriate file organization by balancing various important design factors.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

26) A factor to consider when choosing a file organization is:
A) inefficient data retrieval.
B) DDL.
C) efficient storage.
D) DML.
Answer: C
LO: 8.4: Select an appropriate file organization by balancing various important design factors.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

27) One field or combination of fields for which more than one record may have the same combination of values is called a(n):
A) secondary key.
B) index.
C) composite key.
D) linked key.
Answer: A
LO: 8.4: Select an appropriate file organization by balancing various important design factors.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

28) In which type of file is multiple key retrieval not possible?
A) Sequential
B) Hashed
C) Indexed
D) Clustered
Answer: B
LO: 8.5: Describe three importalocking thent types of file organization.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

29) A file organization that uses hashing to map a key into a location in an index where there is a pointer to the actual data record matching the hash key is called a:
A) hashed file organization.
B) hash key.
C) multi-indexed file organization.
D) hash index table.
Answer: D
LO: 8.5: Describe three important types of file organization.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

30) A file organization where files are not stored in any particular order is considered a:
A) hashed file organization.
B) hash key.
C) multi-indexed file organization.
D) heap file organization.
Answer: D
LO: 8.5: Describe three important types of file organization.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

31) An index on columns from two or more tables that come from the same domain of values is called a:
A) bitmap index.
B) multivalued index.
C) join index.
D) transaction index.
Answer: C
LO: 8.6: Describe the purpose of indexes and the important considerations in selecting attributes to be indexed.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

32) A(n) _____ is a routine that converts a primary key value into a record address.
A) record index calculator
B) index pointer program
C) hashing algorithm
D) pointing algorithm
Answer: C
LO: 8.6: Describe the purpose of indexes and the important considerations in selecting attributes to be indexed.
Difficulty: Easy
Classification: Concept

AACSB: Information Technology

33) A method that speeds query processing by running a query at the same time against several partitions of a table using multiprocessors is called:
A) multiple partition queries.
B) perpendicular query processing.
C) parallel query processing.
D) query optimization.
Answer: C
LO: 8.6: Describe the purpose of indexes and the important considerations in selecting attributes to be indexed.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

34) A command used in Oracle to display how the query optimizer intends to access indexes, use parallel servers, and join tables to prepare query results is the:
A) explain plan.
B) show optimization.
C) explain query.
D) analyze query.
Answer: A
LO: 8.6: Describe the purpose of indexes and the important considerations in selecting attributes to be indexed.
Difficulty: Difficult
Classification: Concept
AACSB: Information Technology

35) All of the following are common denormalization opportunities EXCEPT:
A) two entities with a one-to-one relationship.
B) a one-to-many relationship.
C) a many-to-many relationship with nonkey attributes.
D) reference data.
Answer: B
LO: 8.7: Translate a relational data model into efficient database structures, including knowing when and how to denormalize the logical data model.
Difficulty: Difficult
Classification: Concept
AACSB: Information Technology

36) In most cases, the goal of _____ dominates the design process.
A) efficient data processing
B) security
C) quick pointer updates
D) shorter design times
Answer: A
LO: 8.7: Translate a relational data model into efficient database structures, including knowing when and how to denormalize the logical data model.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

37) Distributing the rows of data into separate files is called:
A) normalization.
B) horizontal partitioning.
C) vertical partitioning.
D) file allocation.
Answer: B
LO: 8.7: Translate a relational data model into efficient database structures, including knowing when and how to denormalize the logical data model.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

38) Horizontal partitioning makes sense:
A) when different categories of a table's rows are processed separately.
B) when less security is needed.
C) when partitions must be organized the same.
D) when only one category is allowed.
Answer: A
LO: 8.7: Translate a relational data model into efficient database structures, including knowing when and how to denormalize the logical data model.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

39) An advantage of partitioning is:
A) efficiency.
B) remote optimization.
C) extra space and update time.
D) increase redundancy.
Answer: A
LO: 8.7: Translate a relational data model into efficient database structures, including knowing when and how to denormalize the logical data model.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

40) A disadvantage of partitioning is:
A) simplicity.
B) remote optimization.
C) extra space and update time.
D) shorter technology spans.
Answer: C
LO: 8.7: Translate a relational data model into efficient database structures, including knowing when and how to denormalize the logical data model.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

41) _____ partitioning distributes the columns of a table into several separate physical records.
A) Horizontal
B) Crossways
C) Vertical
D) Final
Answer: C
LO: 8.7: Translate a relational data model into efficient database structures, including knowing when and how to denormalize the logical data model.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

42) A form of denormalization where the same data are purposely stored in multiple places in the database is called:
A) data duplication.
B) data replication.
C) advanced placement.
D) horizontal partitioning.
Answer: B
LO: 8.7: Translate a relational data model into efficient database structures, including knowing when and how to denormalize the logical data model.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

43) Which of the following threats involves outside parties using information to embarrass a company?
A) Accidental loss
B) Theft and fraud
C) Loss of confidentiality
D) Loss of data integrity
Answer: C
LO: 8.8: Describe the problem of database security and list five techniques that are used to enhance security.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

44) Guidelines for server security should include all of the following EXCEPT:
A) securing the network between client and server.
B) guidelines for password lengths.
C) password naming conventions.
D) guidelines for frequency of password changes.
Answer: A
LO: 8.8: Describe the problem of database security and list five techniques that are used to enhance security.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

45) While views promote security by restricting user access to data, they are not adequate security measures because:
A) an unauthorized person may gain access to a view through experimentation.
B) all users can read any view.
C) a view's data does not change.
D) views are not possible to create in most DBMS.
Answer: A
LO: 8.8: Describe the problem of database security and list five techniques that are used to enhance security.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

46) A trigger can be used as a security measure in which of the following ways?
A) To check for viruses
B) To cause special handling procedures to be executed
C) To design a database
D) To conduct a DFD analysis
Answer: B
LO: 8.8: Describe the problem of database security and list five techniques that are used to enhance security.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

47) Controls designed to restrict access and activities are called:
A) schemas.
B) business rules.
C) encryption controls.
D) authorization rules.
Answer: D
LO: 8.8: Describe the problem of database security and list five techniques that are used to enhance security.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

48) Which of the following is a principal type of authorization table?
A) Subject
B) Transaction
C) View
D) Index
Answer: A
LO: 8.8: Describe the problem of database security and list five techniques that are used to enhance security.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

49) A device to measure or detect fingerprints or signatures is called a(n) _____ device.
A) biometric
B) view
C) ink
D) laser
Answer: A
LO: 8.8: Describe the problem of database security and list five techniques that are used to enhance security.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

50) The coding or scrambling of data so that humans cannot read them is called:
A) demarcation.
B) hiding.
C) encoding.
D) encryption.
Answer: D
LO: 8.8: Describe the problem of database security and list five techniques that are used to enhance security.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

51) A credit-card sized plastic card with an embedded microprocessor chip with the ability to store, process, and output electronic data in a secure manner is called a(n):
A) smart chip.
B) smart card.
C) e-credit card.
D) secure card.
Answer: B
LO: 8.8: Describe the problem of database security and list five techniques that are used to enhance security.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

52) Sarbanes-Oxley Act was enacted to ensure the integrity of:
A) SQL.
B) public companies' financial statements.
C) private companies' shareholders meetings.
D) Entity-Relationship Diagrams.
Answer: B
LO: 8.9: Understand the role of databases in Sarbanes-Oxley compliance.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

53) An audit trail of database changes is kept by a:
A) change control device.
B) subschema.
C) before image.
D) journalizing facility.
Answer: D
LO: 8.10: Describe the problem of database recovery and list four basic facilities that are included with a DBMS to recover databases.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

54) A DBMS periodically suspends all processing and synchronizes its files and journals through the use of a:
A) checkpoint facility.
B) backup facility.
C) recovery manager.
D) database change log.
Answer: A
LO: 8.10: Describe the problem of database recovery and list four basic facilities that are included with a DBMS to recover databases.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

55) A discrete unit of work that must be processed completely or not at all within a computer system is called a:
A) change control device.
B) transaction.
C) before image.
D) journalizing facility.
Answer: B
LO: 8.10: Describe the problem of database recovery and list four basic facilities that are included with a DBMS to recover databases.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

56) A _____ is a DBMS module that restores the database to a correct condition when a failure occurs.
A) backup facility
B) recovery manager
C) restart facility
D) transaction logger
Answer: B
LO: 8.10: Describe the problem of database recovery and list four basic facilities that are included with a DBMS to recover databases.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

57) _____ is used to undo unwanted database changes.
A) Rollback
B) Rollforward
C) Restart
D) Encryption
Answer: A
LO: 8.10: Describe the problem of database recovery and list four basic facilities that are included with a DBMS to recover databases.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

58) Forward recovery is faster than restore/rerun because:
A) transactions do not have to be repeated.
B) security can be avoided.
C) images are mirrored.
D) systems are more complete.
Answer: A
LO: 8.10: Describe the problem of database recovery and list four basic facilities that are included with a DBMS to recover databases.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

59) The preferred method of fixing an aborted transaction is:
A) repairing the schema.
B) switching.
C) duplication of data.
D) backing out the transaction.
Answer: D
LO: 8.10: Describe the problem of database recovery and list four basic facilities that are included with a DBMS to recover databases.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

60) When incorrect data have been introduced, the database is best recovered by:
A) starting with a new ERD.
B) formatting server.
C) restarting from the most recent checkpoint and processing subsequent transactions.
D) reloading RDMS software.
Answer: C
LO: 8.10: Describe the problem of database recovery and list four basic facilities that are included with a DBMS to recover databases.
Difficulty: Moderate
Classification: Concept

AACSB: Information Technology

61) A transaction that terminates abnormally is called a(n) _____ transaction.
A) terminated
B) aborted
C) completed
D) deleted
Answer: B
LO: 8.10: Describe the problem of database recovery and list four basic facilities that are included with a DBMS to recover databases.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

62) With _____, the database itself is lost, destroyed, or cannot be read.
A) aborted transaction
B) database destruction
C) incorrect data
D) system failure
Answer: B
LO: 8.10: Describe the problem of database recovery and list four basic facilities that are included with a DBMS to recover databases.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

63) All of the following are characteristics of cloud technologies EXCEPT:
A) unlimited bandwidth.
B) on-demand self-service IT capabilities.
C) broad network access.
D) rapid elasticity.
Answer: A
LO: 8.12: Understand the impact of the use of cloud-based database services on database infrastructure.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

64) A cloud computing approach in which the service consists of infrastructure resources and additional tools that enable application and solution data management solution developers to reach a high level of productivity is called:
A) Software-as-a-service.
B) Platform-as-a-service.
C) Infrastructure-as-a-service.
D) Tools-as-a-service.
Answer: B
LO: 8.12: Understand the impact of the use of cloud-based database services on database infrastructure.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

65) A cloud computing approach in which the service consists mainly of hardware and systems software resources is called:
A) Infrastructure-as-a-service.
B) Platform-as-a-service.
C) Software-as-a-service.
D) IDE.
Answer: A
LO: 8.12: Understand the impact of the use of cloud-based database services on database infrastructure.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

66) A cloud computing approach in which the service consists of software solutions intended to address the needs of a noncompeting activity is called:
A) Infrastructure-as-a-service.
B) Platform-as-a-service.
C) Software-as-a-service.
D) Soft-computing-service.
Answer: C
LO: 8.12: Understand the impact of the use of cloud-based database services on database infrastructure.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

67) A data management platform service is called:
A) Infrastructure-as-a-service.
B) Platform-as-a-service.
C) Software-as-a-service.
D) Database-as-a-service.
Answer: D
LO: 8.12: Understand the impact of the use of cloud-based database services on database infrastructure.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

68) All of the following are advantages to cloud-based computing EXCEPT:
A) no need for initial investment in hardware, physical facilities and systems software.
B) elasticity.
C) organizations can explore new data management technologies more easily.
D) ACID support for database as a service.
Answer: D
LO: 8.13: Describe the advantages and disadvantages of cloud-based database infrastructure.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

69) All of the following are disadvantages to cloud-based computing EXCEPT:
A) the promise of elasticity is not fulfilled because the model will not adapt to changing requirements.
B) live migration from one environment to another is a challenge.
C) DBaaS is still struggling to provide ACID properties of databases.
D) the visibility of costs of data management is better.
Answer: D
LO: 8.13: Describe the advantages and disadvantages of cloud-based database infrastructure.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

70) Requirements for response time, data security, backup, and recovery are all requirements for physical design.
Answer: TRUE
LO: 8.2: Describe the physical database design process, its objectives, and its deliverables.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

71) One decision in the physical design process is selecting structures.
Answer: TRUE
LO: 8.2: Describe the physical database design process, its objectives, and its deliverables.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

72) The logical database design always forms the best foundation for grouping attributes in the physical design.
Answer: FALSE
LO: 8.2: Describe the physical database design process, its objectives, and its deliverables.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

73) Efficient database structures will be beneficial only if queries and the underlying database management system are tuned to properly use the structures.
Answer: TRUE
LO: 8.2: Describe the physical database design process, its objectives, and its deliverables.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

74) SOX stands for the Sorbet-Oxford Act.
Answer: FALSE
LO: 8.2: Describe the physical database design process, its objectives, and its deliverables.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

75) Adding notations to the EER diagram regarding data volumes and usage is of no value to the physical design process.
Answer: FALSE
LO: 8.2: Describe the physical database design process, its objectives, and its deliverables.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

76) The smallest unit of named application data is a record.
Answer: FALSE
LO: 8.2: Describe the physical database design process, its objectives, and its deliverables.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

77) One objective of selecting a data type is to minimize storage space.
Answer: TRUE
LO: 8.2: Describe the physical database design process, its objectives, and its deliverables.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

78) The Number datatype would be appropriate for a zip code.
Answer: FALSE
LO: 8.2: Describe the physical database design process, its objectives, and its deliverables.
Difficulty: Moderate
Classification: Application
AACSB: Information Technology

79) VarChar2 would be appropriate for a user that wanted a text datatype for LastName that would only consume the required space.
Answer: TRUE
LO: 8.2: Describe the physical database design process, its objectives, and its deliverables.
Difficulty: Moderate
Classification: Application
AACSB: Information Technology

80) A default value is the value that a field will always assume, regardless of what the user enters for an instance of that field.
Answer: FALSE
LO: 8.2: Describe the physical database design process, its objectives, and its deliverables.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

81) A range control limits the set of permissible values that a field may assume.
Answer: TRUE
LO: 8.2: Describe the physical database design process, its objectives, and its deliverables.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

82) Sensitivity testing involves ignoring missing data unless knowing a value might significantly change results.
Answer: TRUE
LO: 8.2: Describe the physical database design process, its objectives, and its deliverables.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

83) One method to handle missing values is to substitute an exact value.
Answer: FALSE
LO: 8.2: Describe the physical database design process, its objectives, and its deliverables.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

84) An extent is a named portion of secondary memory allocated for the purpose of storing physical records.
Answer: FALSE
LO: 8.3: Choose storage formats for attributes from a logical data model.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

85) A tablespace is a named set of disk storage elements in which physical files for the database tables may be stored.
Answer: TRUE
LO: 8.3: Choose storage formats for attributes from a logical data model.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

86) A pointer is a field of data that can be used to locate a related field or record of data.
Answer: TRUE
LO: 8.4: Select an appropriate file organization by balancing various important design factors.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

87) A file organization is a named portion of primary memory.
Answer: FALSE
LO: 8.4: Select an appropriate file organization by balancing various important design factors.
Difficulty: Difficult
Classification: Concept
AACSB: Information Technology

88) A key is a data structure used to determine the location of rows in a file that satisfy some condition.
Answer: FALSE
LO: 8.4: Select an appropriate file organization by balancing various important design factors.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

89) Fast data retrieval is one factor to consider when choosing a file organization for a particular database file.
Answer: TRUE
LO: 8.4: Select an appropriate file organization by balancing various important design factors.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

90) A hashing algorithm is a routine that converts a primary key value into a relative record address.
Answer: TRUE
LO: 8.4: Select an appropriate file organization by balancing various important design factors.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

91) Clustering allows for adjacent secondary memory locations to contain rows from several tables.
Answer: TRUE
LO: 8.4: Select an appropriate file organization by balancing various important design factors.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

92) In a sequential file, the records are stored in sequence according to a primary key value.
Answer: TRUE
LO: 8.5: Describe three important types of file organization.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

93) In a Heap file organization, files are not stored in any particular order.
Answer: TRUE
LO: 8.5: Describe three important types of file organization.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

94) A join index is a combination of two or more indexes.
Answer: FALSE
LO: 8.6: Describe the purpose of indexes and the important considerations in selecting attributes to be indexed.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

95) Indexes are most useful on small, clustered files.
Answer: FALSE
LO: 8.6: Describe the purpose of indexes and the important considerations in selecting attributes to be indexed.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

96) Indexes are most useful for columns that frequently appear in WHERE clauses of SQL commands, either to qualify the rows to select or for linking.
Answer: TRUE
LO: 8.6: Describe the purpose of indexes and the important considerations in selecting attributes to be indexed.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

97) Using an index for attributes referenced in ORDER BY and GROUP BY clauses has no significant impact upon database performance.
Answer: FALSE
LO: 8.6: Describe the purpose of indexes and the important considerations in selecting attributes to be indexed.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

98) Denormalization is the process of transforming relations with variable-length fields into those with fixed-length fields.
Answer: FALSE
LO: 8.7: Translate a relational data model into efficient database structures, including knowing when and how to denormalize the logical data model.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

99) Keeping the zip code with the city and state in a table is a typical form of denormalization.
Answer: TRUE
LO: 8.7: Translate a relational data model into efficient database structures, including knowing when and how to denormalize the logical data model.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

100) Denormalization almost always leads to more storage space for raw data.
Answer: TRUE
LO: 8.7: Translate a relational data model into efficient database structures, including knowing when and how to denormalize the logical data model.
Difficulty: Difficult
Classification: Concept
AACSB: Information Technology

101) Horizontal partitioning refers to the process of combining several smaller relations into a larger table.
Answer: FALSE
LO: 8.7: Translate a relational data model into efficient database structures, including knowing when and how to denormalize the logical data model.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

102) Horizontal partitioning is very different from creating a supertype/subtype relationship.
Answer: FALSE
LO: 8.7: Translate a relational data model into efficient database structures, including knowing when and how to denormalize the logical data model.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

103) Security is one advantage of partitioning.
Answer: TRUE
LO: 8.7: Translate a relational data model into efficient database structures, including knowing when and how to denormalize the logical data model.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

104) Reduced uptime is a disadvantage of partitioning.
Answer: FALSE
LO: 8.7: Translate a relational data model into efficient database structures, including knowing when and how to denormalize the logical data model.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

105) Hash partitioning spreads data evenly across partitions independent of any partition key value.
Answer: TRUE
LO: 8.7: Translate a relational data model into efficient database structures, including knowing when and how to denormalize the logical data model.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

106) Free range partitioning is a type of horizontal partitioning in which each partition is defined by a range of values for one or more columns in the normalized table.
Answer: FALSE
LO: 8.7: Translate a relational data model into efficient database structures, including knowing when and how to denormalize the logical data model.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

107) Vertical partitioning means distributing the columns of a table into several separate physical tables.
Answer: TRUE
LO: 8.7: Translate a relational data model into efficient database structures, including knowing when and how to denormalize the logical data model.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

108) Parallel query processing speed is not significantly different from running queries in a non-parallel mode.
Answer: FALSE
LO: 8.7: Translate a relational data model into efficient database structures, including knowing when and how to denormalize the logical data model.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

109) Along with table scans, other elements of a query can be processed in parallel.
Answer: TRUE
LO: 8.7: Translate a relational data model into efficient database structures, including knowing when and how to denormalize the logical data model.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

110) The query processor always knows the best way to process a query.
Answer: FALSE
LO: 8.7: Translate a relational data model into efficient database structures, including knowing when and how to denormalize the logical data model.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

111) The goal of database security is the protection of data from accidental or intentional threats to its integrity and access.
Answer: TRUE
LO: 8.8: Describe the problem of database security and list five techniques that are used to enhance security.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

112) Loss of data integrity does not impact the quality of data in a database.
Answer: FALSE
LO: 8.8: Describe the problem of database security and list five techniques that are used to enhance security.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

113) A view can be built to present only the data to which a user requires access.
Answer: TRUE
LO: 8.8: Describe the problem of database security and list five techniques that are used to enhance security.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

114) A domain is a way to create a structure that acts like a table.
Answer: FALSE
LO: 8.8: Describe the problem of database security and list five techniques that are used to enhance security.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

115) A trigger can be used for security purposes to prohibit inappropriate actions, such as changing a salary value outside of a business day.
Answer: TRUE
LO: 8.8: Describe the problem of database security and list five techniques that are used to enhance security.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

116) Authorization rules are controls incorporated in the data management system that restrict access to data and also restrict the actions that people may take when they access the data.
Answer: TRUE
LO: 8.8: Describe the problem of database security and list five techniques that are used to enhance security.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

117) There are two principal types of authorization tables: one for subjects and one for facts.
Answer: FALSE
LO: 8.8: Describe the problem of database security and list five techniques that are used to enhance security.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

118) With a one-key encryption standard, both the sender and the receiver need to know the key that is used to scramble the transmitted or stored data.
Answer: TRUE
LO: 8.8: Describe the problem of database security and list five techniques that are used to enhance security.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

119) The first line of defense for authentication is the use of passwords, which is a one-factor authentication scheme.
Answer: TRUE
LO: 8.8: Describe the problem of database security and list five techniques that are used to enhance security.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

120) Three-factor authentication is most often implemented with a credit card.
Answer: FALSE
LO: 8.8: Describe the problem of database security and list five techniques that are used to enhance security.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

121) Controls incorporated into a data management system that restrict access to data are called authentication rules.
Answer: FALSE
LO: 8.8: Describe the problem of database security and list five techniques that are used to enhance security.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

122) An audit trail of transactions and database changes is kept by a journalizing facility.
Answer: TRUE
LO: 8.8: Describe the problem of database security and list five techniques that are used to enhance security.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

123) A key component of the Sarbanes-Oxley Act was enacted to ensure the integrity of IT infrastructure in use within an organization.
Answer: TRUE
LO: 8.9: Understand the role of databases in Sarbanes-Oxley compliance.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

124) The record log is a record of the essential data for each transaction that has been processed against the database.
Answer: FALSE
LO: 8.10: Describe the problem of database recovery and list four basic facilities that are included with a DBMS to recover databases.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

125) A checkpoint facility is a facility by which the DBMS refuses to accept any new transactions.
Answer: TRUE
LO: 8.10: Describe the problem of database recovery and list four basic facilities that are included with a DBMS to recover databases.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

126) The restoration manager allows the DBMS to restore the database to a correct condition and restart processing transactions.
Answer: FALSE
LO: 8.10: Describe the problem of database recovery and list four basic facilities that are included with a DBMS to recover databases.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

127) The restore/rerun technique involves reprocessing the day's transactions against the backup copy of the database.
Answer: TRUE
LO: 8.10: Describe the problem of database recovery and list four basic facilities that are included with a DBMS to recover databases.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

128) A database management system needs to provide only three basic facilities for backup and recovery of a database: backup facilities, journalizing facilities, and a recovery manager.
Answer: FALSE
LO: 8.10: Describe the problem of database recovery and list four basic facilities that are included with a DBMS to recover databases.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

129) A DBMS must provide journalizing facilities to provide an audit trail of transactions and database changes.
Answer: TRUE
LO: 8.10: Describe the problem of database recovery and list four basic facilities that are included with a DBMS to recover databases.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

130) The transaction log contains before and after images of records that have been modified.
Answer: FALSE
LO: 8.10: Describe the problem of database recovery and list four basic facilities that are included with a DBMS to recover databases.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

131) A DBMS may perform checkpoints automatically or in response to commands in user application programs.
Answer: TRUE
LO: 8.10: Describe the problem of database recovery and list four basic facilities that are included with a DBMS to recover databases.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

132) In order to perform a restore/rerun, the database must be mirrored.
Answer: FALSE
LO: 8.10: Describe the problem of database recovery and list four basic facilities that are included with a DBMS to recover databases.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

133) A business transaction is a sequence of steps that constitute some well-defined business activity.
Answer: TRUE
LO: 8.10: Describe the problem of database recovery and list four basic facilities that are included with a DBMS to recover databases.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

134) Backward recovery starts with an earlier copy of the database.
Answer: FALSE
LO: 8.10: Describe the problem of database recovery and list four basic facilities that are included with a DBMS to recover databases.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

135) A typical cause of database destruction is a disk crash.
Answer: TRUE
LO: 8.10: Describe the problem of database recovery and list four basic facilities that are included with a DBMS to recover databases.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

136) Database applications are not very disk intensive.
Answer: FALSE
LO: 8.11: Describe the problem of tuning a database to achieve better performance, and list five areas where changes may be made when tuning a database.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

137) Examination and modification of the SQL code in an application may lead to performance improvements.
Answer: TRUE
LO: 8.11: Describe the problem of tuning a database to achieve better performance, and list five areas where changes may be made when tuning a database.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

138) Unlimited bandwidth is a characteristic of cloud computing.
Answer: FALSE
LO: 8.12: Understand the impact of the use of cloud-based database services on database infrastructure.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

139) Broad network access is a characteristic of cloud computing.
Answer: TRUE
LO: 8.12: Understand the impact of the use of cloud-based database services on database infrastructure.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

***Modern Database Management, 13e* (Hoffer)**
Chapter 9 Data Warehousing and Data Integration

1) The analysis of data or information to support decision making is called:
A) operational processing.

B) informational processing.
C) artificial intelligence.
D) data scrubbing.
Answer: B
LO: 9.2: Give two important reasons why an "information gap" often exists between an information manager's need and the information generally available.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

2) The characteristic that indicates that a data warehouse is organized around key high-level entities of the enterprise is:
A) subject-oriented.
B) integrated.
C) time-variant.
D) nonvolatile.
Answer: A
LO: 9.2: Give two important reasons why an "information gap" often exists between an information manager's need and the information generally available.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

3) When we consider data in the data warehouse to be time variant, we mean:
A) that the time of storage varies.
B) data in the warehouse contain a time dimension so that they may be used to study trends and changes.
C) that there is a time delay between when data are posted and when we report on the data.
D) that time is relative.
Answer: B
LO: 9.2: Give two important reasons why an "information gap" often exists between an information manager's need and the information generally available.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

4) The key discovery that triggered the development of data warehouses was:
A) computer viruses.
B) new ways to present information using mobile devices.
C) the recognition of the differences between transactional systems and informational systems.
D) the invention of the iPad.
Answer: C
LO: 9.3: List two major reasons most organizations today need data warehousing.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

5) Which of the following factors drive the need for data warehousing?
A) Businesses need an integrated view of company information.
B) Informational data must be kept together with operational data.
C) Data warehouses generally have better security.
D) Reduce virus and Trojan horse threats.
Answer: A
LO: 9.3: List two major reasons most organizations today need data warehousing.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

6) Which of the following organizational trends does not encourage the need for data warehousing?
A) Multiple, nonsynchronized systems
B) Focus on customer relationship management
C) Downsizing
D) Focus on supplier relationship management
Answer: C
LO: 9.3: List two major reasons most organizations today need data warehousing.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

7) Going from a summary view to progressively lower levels of detail is called data:
A) cubing.
B) drill down.
C) dicing.
D) pivoting.
Answer: B
LO: 9.4: Name and briefly describe the three levels in a data warehouse architecture.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

8) Which of the following data-mining applications identifies customers for promotional activity?
A) Population profiling
B) Target marketing
C) Usage analysis
D) Product affinity
Answer: B
LO: 9.4: Name and briefly describe the three levels in a data warehouse architecture.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

9) Informational systems are designed for all of the following EXCEPT:
A) running a business in real time.
B) supporting decision making.
C) complex queries.
D) data mining.
Answer: A
LO: 9.4: Name and briefly describe the three levels in a data warehouse architecture.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

10) Operational and informational systems are generally separated because of which of the following factors?
A) A data warehouse centralizes data that are scattered throughout disparate operational systems and makes them readily available for decision support applications.
B) A properly designed data warehouse decreases value to data.
C) A separate data warehouse increases contention for resources.
D) Only operational systems allow SQL statements.
Answer: A
LO: 9.4: Name and briefly describe the three levels in a data warehouse architecture.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

11) A data mart is a(n):
A) enterprise-wide data warehouse.
B) smaller system built upon file processing technology.
C) data warehouse that is limited in scope.
D) generic on-line shopping site.
Answer: C
LO: 9.4: Name and briefly describe the three levels in a data warehouse architecture.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

12) One characteristic of independent data marts is complexity for end users when they need to access data in separate data marts. This complexity is caused by not only having to access data from separate databases, but also from:
A) the possibility of a new generation of inconsistent data systems, the data marts themselves.
B) lack of user training.
C) denormalized data.
D) incongruent data formats.
Answer: A
LO: 9.4: Name and briefly describe the three levels in a data warehouse architecture.
Difficulty: Difficult
Classification: Concept
AACSB: Information Technology

13) All of the following are limitations of the independent data mart EXCEPT:
A) separate extraction, transformation, and loading processes are developed for each data mart.
B) data marts may not be consistent with one another.
C) there is no capability to drill down into greater detail in other data marts.
D) it is often more expedient to build a data mart than a data warehouse.
Answer: D
LO: 9.4: Name and briefly describe the three levels in a data warehouse architecture.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

14) A dependent data mart:
A) is filled with data extracted directly from the operational system.
B) is filled exclusively from the enterprise data warehouse with reconciled data.
C) is dependent upon an operational system.
D) participates in a relationship with an entity.
Answer: B
LO: 9.4: Name and briefly describe the three levels in a data warehouse architecture.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

15) An operational data store (ODS) is a(n):
A) place to store all unreconciled data.
B) representation of the operational data.
C) integrated, subject-oriented, updateable, current-valued, detailed database designed to serve the decision support needs of operational users.
D) small-scale data mart.
Answer: C
LO: 9.4: Name and briefly describe the three levels in a data warehouse architecture.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

16) A logical data mart is a(n):
A) data mart consisting of only logical data.
B) data mart created by a relational view of a slightly denormalized data warehouse.
C) integrated, subject-oriented, detailed database designed to serve operational users.
D) centralized, integrated data warehouse.
Answer: B
LO: 9.4: Name and briefly describe the three levels in a data warehouse architecture.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

17) All of the following are unique characteristics of a logical data mart EXCEPT:
A) logical data marts are not physically separate databases, but rather a relational view of a data warehouse.
B) the data mart is always up-to-date since data in a view is created when the view is referenced.
C) the process of creating a logical data mart is lengthy.
D) data are moved into the data warehouse rather than a separate staging area.
Answer: C
LO: 9.4: Name and briefly describe the three levels in a data warehouse architecture.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

18) The real-time data warehouse is characterized by which of the following?
A) It accepts batch feeds of transaction data.
B) Data are immediately transformed and loaded into the warehouse.
C) It provides periodic access for the transaction processing systems to an enterprise data warehouse.
D) It is based on Oracle technology.
Answer: B
LO: 9.4: Name and briefly describe the three levels in a data warehouse architecture.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

19) _____ technologies are allowing more opportunities for real-time data warehouses.
A) Web
B) MOLAP
C) RFID
D) GPS
Answer: C
LO: 9.4: Name and briefly describe the three levels in a data warehouse architecture.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

20) All of the following are some beneficial applications for real-time data warehousing EXCEPT:
A) just-in-time transportation.
B) e-commerce. For example, an abandoned shopping cart can trigger an e-mail promotional message.
C) fraud detection in credit card transactions.
D) data entry.
Answer: D
LO: 9.4: Name and briefly describe the three levels in a data warehouse architecture.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

21) Data that are detailed, current, and intended to be the single, authoritative source of all decision support applications are called _____ data.
A) reconciled
B) subject
C) derived
D) detailed
Answer: A
LO: 9.4: Name and briefly describe the three levels in a data warehouse architecture.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

22) A database action that results from a transaction is called a(n):
A) transition.
B) event.
C) log entry.
D) journal happening.
Answer: B
LO: 9.4: Name and briefly describe the three levels in a data warehouse architecture.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

23) Data that are never physically altered once they are added to the store are called _____ data.
A) transient
B) override
C) periodic
D) complete
Answer: C
LO: 9.4: Name and briefly describe the three levels in a data warehouse architecture.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

24) Which of the following is NOT an objective of derived data?
A) Ease of use for decision support systems
B) Faster response time for user queries
C) Support data mining applications
D) Eliminate the need for application software
Answer: D
LO: 9.4: Name and briefly describe the three levels in a data warehouse architecture.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

25) A star schema contains both fact and _____ tables.
A) narrative
B) cross functional
C) dimension
D) starter
Answer: C
LO: 9.5: Describe the two major components of a star schema.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

26) Every key used to join the fact table with a dimension table should be a _____ key.
A) primary
B) surrogate
C) foreign
D) secondary
Answer: B
LO: 9.5: Describe the two major components of a star schema.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

27) The level of detail in a fact table determined by the intersection of all the components of the primary key, including all foreign keys and any other primary key elements, is called the:
A) span.
B) grain.
C) selection.
D) aggregation.
Answer: B
LO: 9.5: Describe the two major components of a star schema.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

28) Grain and duration have a direct impact on the size of _____ tables.
A) selection
B) grain
C) fact
D) figure
Answer: C
LO: 9.6: Estimate the number of rows and total size, in bytes, of a fact table, given reasonable assumptions concerning the database dimensions.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

29) When determining the size of a fact table, estimating the number of possible values for each dimension associated with the fact table is equivalent to:
A) determining the number of DDL statements made to create a table.
B) determining the number of possible values for each foreign key in the fact table.
C) determining the number of DML statements made to create a table.
D) determining the number of TRIGGERS used in the database.
Answer: B
LO: 9.6: Estimate the number of rows and total size, in bytes, of a fact table, given reasonable assumptions concerning the database dimensions.
Difficulty: Difficult
Classification: Concept
AACSB: Information Technology

30) Factless fact tables may apply when:
A) we are deleting sales.
B) we are tracking sales.
C) we are taking inventory of the set of possible occurrences.
D) we are deleting correlated data.
Answer: D
LO: 9.7: Design a data mart using various schemes to normalize and denormalize dimensions and to account for fact history, hierarchical relationships between dimensions, and changing dimension attribute values.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

31) An expanded version of a star schema in which all of the tables are fully normalized is called a(n):
A) snowflake schema.
B) operational schema.
C) DSS schema.
D) complete schema.
Answer: A
LO: 9.7: Design a data mart using various schemes to normalize and denormalize dimensions and to account for fact history, hierarchical relationships between dimensions, and changing dimension attribute values.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

32) All of the following are ways to handle changing dimensions EXCEPT:
A) overwrite the current value with the new value.
B) for each dimension attribute that changes, create a current value field and as many old value fields as we wish.
C) create a new dimension table row each time the dimension object changes.
D) create a snowflake schema.
Answer: D
LO: 9.7: Design a data mart using various schemes to normalize and denormalize dimensions and to account for fact history, hierarchical relationships between dimensions, and changing dimension attribute values.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

33) _____ is an ill-defined term applied to databases where size strains the ability of commonly used relational DBMSs to manage the data.
A) Mean data
B) Small data
C) Star data
D) Big data
Answer: D
LO: 9.7: Design a data mart using various schemes to normalize and denormalize dimensions and to account for fact history, hierarchical relationships between dimensions, and changing dimension attribute values.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

34) _____ is/are a new technology which trade(s) off storage space savings for computing time.
A) Dimensional modeling
B) Columnar databases
C) Fact tables
D) Snowflake schemas
Answer: B
LO: 9.7: Design a data mart using various schemes to normalize and denormalize dimensions and to account for fact history, hierarchical relationships between dimensions, and changing dimension attribute values.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

35) Conformed dimensions allow users to do the following:
A) delete correlated data.
B) query across fact tables with consistency.
C) identify viruses in web sites.
D) fix viruses in html documents.
Answer: B
LO: 9.8: Develop the requirements for a data mart from questions supporting decision making.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

36) A class of database technology used to store textual and other unstructured data is called:
A) mySQL.
B) NoSQL.
C) KnowSQL.
D) PHP.
Answer: B
LO: 9.9: Understand the trends that are likely to affect the future of data warehousing in organizations.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

37) All of the following are ways to consolidate data EXCEPT:
A) application integration.
B) data rollup and integration.
C) business process integration.
D) user interaction integration.
Answer: B
LO: 9.10: Describe the three types of data integration approaches.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

38) Data federation is a technique which:
A) creates an integrated database from several separate databases.
B) creates a distributed database.
C) provides a virtual view of integrated data without actually creating one centralized database.
D) provides a real-time update of shared data.
Answer: C
LO: 9.10: Describe the three types of data integration approaches.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

39) _____ duplicates data across databases.
A) Data propagation
B) Data duplication
C) Redundant replication
D) A replication server
Answer: A
LO: 9.10: Describe the three types of data integration approaches.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

40) Event-driven propagation:
A) provides a means to duplicate data for events.
B) pushes data to duplicate sites as an event occurs.
C) pulls duplicate data from redundant sites.
D) triggers a virus.
Answer: B
LO: 9.10: Describe the three types of data integration approaches.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

41) The major advantage of data propagation is:
A) real-time cascading of data changes throughout the organization.
B) duplication of non-redundant data.
C) the ability to have trickle-feeds.
D) virus elimination.
Answer: A
LO: 9.10: Describe the three types of data integration approaches.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

42) User interaction integration is achieved by creating fewer _____ that feed different systems.
A) clients
B) networks
C) computers
D) user interfaces
Answer: D
LO: 9.10: Describe the three types of data integration approaches.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

43) A characteristic of reconciled data that means the data reflect an enterprise-wide view is:
A) detailed.
B) historical.
C) normalized.
D) comprehensive.
Answer: D
LO: 9.11: Describe the four steps and activities of the Extract, Transform, and Load (ETL) process for data integration for a data warehouse.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

44) Informational and operational data differ in all of the following ways EXCEPT:
A) level of detail.
B) normalization level.
C) scope of data.
D) data quality.
Answer: A
LO: 9.11: Describe the four steps and activities of the Extract, Transform, and Load (ETL) process for data integration for a data warehouse.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

45) A method of capturing only the changes that have occurred in the source data since the last capture is called _____ extract.
A) static
B) incremental
C) partial
D) update-driven
Answer: B
LO: 9.11: Describe the four steps and activities of the Extract, Transform, and Load (ETL) process for data integration for a data warehouse.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

46) A technique using artificial intelligence to upgrade the quality of raw data is called:
A) dumping.
B) data reconciliation.
C) completion backwards updates.
D) data scrubbing.
Answer: D
LO: 9.11: Describe the four steps and activities of the Extract, Transform, and Load (ETL) process for data integration for a data warehouse.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

47) All of the following are tasks of data cleansing EXCEPT:
A) decoding data to make them understandable for data warehousing applications.
B) adding time stamps to distinguish values for the same attribute over time.
C) generating primary keys for each row of a table.
D) creating foreign keys.
Answer: D
LO: 9.11: Describe the four steps and activities of the Extract, Transform, and Load (ETL) process for data integration for a data warehouse.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

48) An approach to filling a data warehouse that employs bulk rewriting of the target data periodically is called:
A) dump mode.
B) overwrite mode.
C) refresh mode.
D) update mode.
Answer: C
LO: 9.11: Describe the four steps and activities of the Extract, Transform, and Load (ETL) process for data integration for a data warehouse.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

49) Which type of index is commonly used in data warehousing environments?
A) Joint index
B) Bitmapped index
C) Secondary index
D) Tri-dex
Answer: B
LO: 9.11: Describe the four steps and activities of the Extract, Transform, and Load (ETL) process for data integration for a data warehouse.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

50) Loading data into a data warehouse does NOT involve:
A) appending new rows to the tables in the warehouse.
B) updating existing rows with new data.
C) purging data that have become obsolete or were incorrectly loaded.
D) formatting the hard drive.
Answer: D
LO: 9.11: Describe the four steps and activities of the Extract, Transform, and Load (ETL) process for data integration for a data warehouse.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

51) A technique using pattern recognition to upgrade the quality of raw data is called:
A) data scrounging.
B) data scrubbing.
C) data gouging.
D) data analysis.
Answer: B
LO: 9.11: Describe the four steps and activities of the Extract, Transform, and Load (ETL) process for data integration for a data warehouse.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

52) Data may be loaded from the staging area into the warehouse by following:
A) SQL commands (Insert/Update).
B) SQL purge.
C) custom-written letters.
D) virus checking.
Answer: A
LO: 9.11: Describe the four steps and activities of the Extract, Transform, and Load (ETL) process for data integration for a data warehouse.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

53) Converting data from the format of its source to the format of its destination is called:
A) data transformation.
B) data loading.
C) data scrubbing.
D) data storage.
Answer: A
LO: 9.12: Explain the various forms of data transformations needed to prepare data for a data warehouse.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

54) The process of combining data from various sources into a single table or view is called:
A) extracting.
B) updating.
C) selecting.
D) joining.
Answer: D
LO: 9.12: Explain the various forms of data transformations needed to prepare data for a data warehouse.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

55) The process of transforming data from a detailed to a summary level is called:
A) extracting.
B) updating.
C) joining.
D) aggregating.
Answer: D
LO: 9.12: Explain the various forms of data transformations needed to prepare data for a data warehouse.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

56) Which of the following is a basic method for single-field transformation?
A) Table lookup
B) Cross-linking entities
C) Cross-linking attributes
D) Field-to-field communication
Answer: A
LO: 9.12: Explain the various forms of data transformations needed to prepare data for a data warehouse.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

57) The development of the relational data model did not contribute to the emergence of data warehousing.
Answer: FALSE
LO: 9.2: Give two important reasons why an "information gap" often exists between an information manager's need and the information generally available.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

58) The need for data warehousing in an organization is driven by its need for an integrated view of high-quality data.
Answer: TRUE
LO: 9.3: List two major reasons most organizations today need data warehousing.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

59) When multiple systems in an organization are synchronized, the need for data warehousing increases.
Answer: FALSE
LO: 9.3: List two major reasons most organizations today need data warehousing.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

60) Informational systems are designed to support decision making based on historical point-in-time and prediction data.
Answer: TRUE
LO: 9.3: List two major reasons most organizations today need data warehousing.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

61) A separate data warehouse causes more contention for resources in an organization.
Answer: FALSE
LO: 9.3: List two major reasons most organizations today need data warehousing.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

62) Organizations adopt data mart architectures because it is easier to have separate, small data warehouses than to get all organizational parties to agree to one view of the organization in a central data warehouse.
Answer: TRUE
LO: 9.3: List two major reasons most organizations today need data warehousing.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

63) An independent data mart is filled with data extracted from the operational environment without the benefit of a data warehouse.
Answer: TRUE
LO: 9.4: Name and briefly describe the three levels in a data warehouse architecture.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

64) A data mart is a data warehouse that contains data that can be used across the entire organization.
Answer: FALSE
LO: 9.4: Name and briefly describe the three levels in a data warehouse architecture.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

65) Independent data marts do not generally lead to redundant data and efforts.
Answer: FALSE
LO: 9.4: Name and briefly describe the three levels in a data warehouse architecture.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

66) An enterprise data warehouse is the control point and single source of all data made available to end users for decision support applications.
Answer: TRUE
LO: 9.4: Name and briefly describe the three levels in a data warehouse architecture.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

67) A corporate information factory (CIF) is a comprehensive view of organizational data in support of all user data requirements.
Answer: TRUE
LO: 9.4: Name and briefly describe the three levels in a data warehouse architecture.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

68) Logical data marts are physically separate databases from the enterprise data warehouse.
Answer: FALSE
LO: 9.4: Name and briefly describe the three levels in a data warehouse architecture.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

69) Scalable technology is often critical to a data mart.
Answer: TRUE
LO: 9.4: Name and briefly describe the three levels in a data warehouse architecture.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

70) An enterprise data warehouse that accepts near-real time feeds of transactional data and immediately transforms and loads the appropriate data is called a real-time data warehouse.
Answer: TRUE
LO: 9.4: Name and briefly describe the three levels in a data warehouse architecture.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

71) Reconciled data are data that have been selected, formatted, and aggregated for end-user decision support applications.
Answer: FALSE
LO: 9.4: Name and briefly describe the three levels in a data warehouse architecture.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

72) The enterprise data model controls the phased evolution of the data warehouse.
Answer: TRUE
LO: 9.4: Name and briefly describe the three levels in a data warehouse architecture.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

73) Operational metadata are derived from the enterprise data model.
Answer: FALSE
LO: 9.4: Name and briefly describe the three levels in a data warehouse architecture.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

74) A dependent data mart is filled from the enterprise data warehouse and its reconciled data.
Answer: TRUE
LO: 9.4: Name and briefly describe the three levels in a data warehouse architecture.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

75) Periodic data are data that are never physically altered or deleted once they have been added to the store.
Answer: TRUE
LO: 9.4: Name and briefly describe the three levels in a data warehouse architecture.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

76) Transient data are never changed.
Answer: FALSE
LO: 9.4: Name and briefly describe the three levels in a data warehouse architecture.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

77) The representation of data in a graphical format is called data mining.
Answer: FALSE
LO: 9.4: Name and briefly describe the three levels in a data warehouse architecture.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

78) Drill-down involves analyzing a given set of data at a finer level of detail.
Answer: TRUE
LO: 9.4: Name and briefly describe the three levels in a data warehouse architecture.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

79) An event is a database action that results from a transaction.
Answer: TRUE
LO: 9.5: Describe the two major components of a star schema.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

80) The status of data is the representation of the data after an event has occurred.
Answer: FALSE
LO: 9.5: Describe the two major components of a star schema.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

81) A fact table holds descriptive data about the business.
Answer: FALSE
LO: 9.5: Describe the two major components of a star schema.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

82) The grain of a data warehouse indicates the size and depth of the records.
Answer: FALSE
LO: 9.5: Describe the two major components of a star schema.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

83) For performance reasons, it may be necessary to define more than one fact table for a star schema.
Answer: TRUE
LO: 9.5: Describe the two major components of a star schema.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

84) There are applications for fact tables without any nonkey data, only the foreign keys for the associated dimensions.
Answer: TRUE
LO: 9.5: Describe the two major components of a star schema.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

85) A conformed dimension is one or more dimension tables associated with only one fact table.
Answer: FALSE
LO: 9.5: Describe the two major components of a star schema.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

86) When a dimension participates in a hierarchy, the database designer can normalize the dimension into a nested set of tables with 1:M relationships between them.
Answer: TRUE
LO: 9.5: Describe the two major components of a star schema.
Difficulty: Difficult
Classification: Application
AACSB: Information Technology

87) An operational data store (ODS) is not designed for use by operational users.
Answer: FALSE
LO: 9.5: Describe the two major components of a star schema.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

88) Grain and duration have a direct impact on the size of fact tables.
Answer: TRUE
LO: 9.6: Estimate the number of rows and total size, in bytes, of a fact table, given reasonable assumptions concerning the database dimensions.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

89) An operational data store is typically a relational database and normalized, but it is tuned for decision-making applications.
Answer: TRUE
LO: 9.7: Design a data mart using various schemes to normalize and denormalize dimensions and to account for fact history, hierarchical relationships between dimensions, and changing dimension attribute values.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

90) An operational data store typically holds a history of snapshots of the state of an organization whereas an enterprise data warehouse does not typically contain history.
Answer: FALSE
LO: 9.7: Design a data mart using various schemes to normalize and denormalize dimensions and to account for fact history, hierarchical relationships between dimensions, and changing dimension attribute values.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

91) A snowflake schema is usually heavily aggregated.
Answer: FALSE
LO: 9.7: Design a data mart using various schemes to normalize and denormalize dimensions and to account for fact history, hierarchical relationships between dimensions, and changing dimension attribute values.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

92) Multidimensional OLAP (MOLAP) tools use variations of SQL and view the database as a relational database, in either a star schema or other normalized or denormalized set of tables.
Answer: FALSE
LO: 9.7: Design a data mart using various schemes to normalize and denormalize dimensions and to account for fact history, hierarchical relationships between dimensions, and changing dimension attribute values.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

93) The first requirement for building a user-friendly interface is a set of metadata that describes the data in the data mart in business terms that users can easily understand.
Answer: TRUE
LO: 9.8: Develop the requirements for a data mart from questions supporting decision making.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

94) Medical claims and pharmaceutical data would be an example of big data.
Answer: TRUE
LO: 9.9: Understand the trends that are likely to affect the future of data warehousing in organizations.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

95) NoSQL is a great technology for storing well-structured data.
Answer: FALSE
LO: 9.9: Understand the trends that are likely to affect the future of data warehousing in organizations.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

96) User interaction integration is achieved by creating fewer user interfaces.
Answer: TRUE
LO: 9.10: Describe the three types of data integration approaches.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

97) Data federation consolidates all data into one database.
Answer: FALSE
LO: 9.10: Describe the three types of data integration approaches.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

98) The major advantage of the data propagation approach to data integration is the near real-time cascading of data changes throughout the organization.
Answer: TRUE
LO: 9.10: Describe the three types of data integration approaches.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

99) Application integration is achieved by coordinating the flow of event information between business applications.
Answer: TRUE
LO: 9.10: Describe the three types of data integration approaches.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

100) Data nationalization provides a virtual view of integrated data without actually bringing the data into one physical database.
Answer: FALSE
LO: 9.10: Describe the three types of data integration approaches.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

101) Data propagation duplicates data across databases, usually with some real-time delay.
Answer: FALSE
LO: 9.10: Describe the three types of data integration approaches.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

102) The data reconciliation process is responsible for transforming operational data to reconciled data.
Answer: TRUE
LO: 9.11: Describe the four steps and activities of the Extract, Transform, and Load (ETL) process for data integration for a data warehouse.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

103) ETL is short for Extract, Transform, Load.
Answer: TRUE
LO: 9.11: Describe the four steps and activities of the Extract, Transform, and Load (ETL) process for data integration for a data warehouse.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

104) There are six major steps to ETL.
Answer: FALSE
LO: 9.11: Describe the four steps and activities of the Extract, Transform, and Load (ETL) process for data integration for a data warehouse.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

105) After the extract, transform, and load is done on data, the data warehouse is never fully normalized.
Answer: FALSE
LO: 9.11: Describe the four steps and activities of the Extract, Transform, and Load (ETL) process for data integration for a data warehouse.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

106) Data reconciliation occurs in two stages, an initial load and subsequent updates.
Answer: TRUE
LO: 9.11: Describe the four steps and activities of the Extract, Transform, and Load (ETL) process for data integration for a data warehouse.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

107) Static extract is a method of capturing only the changes that have occurred in the source data since the last capture.
Answer: FALSE
LO: 9.11: Describe the four steps and activities of the Extract, Transform, and Load (ETL) process for data integration for a data warehouse.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

108) One of the biggest challenges of the extraction process is managing changes in the source system.
Answer: TRUE
LO: 9.11: Describe the four steps and activities of the Extract, Transform, and Load (ETL) process for data integration for a data warehouse.
Difficulty: Difficult
Classification: Concept
AACSB: Information Technology

109) Data are moved to the staging area before extraction takes place.
Answer: FALSE
LO: 9.11: Describe the four steps and activities of the Extract, Transform, and Load (ETL) process for data integration for a data warehouse.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

110) Data scrubbing is a technique using pattern recognition and other artificial intelligence techniques to upgrade the quality of raw data before transforming and moving the data to the data warehouse.
Answer: TRUE
LO: 9.11: Describe the four steps and activities of the Extract, Transform, and Load (ETL) process for data integration for a data warehouse.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

111) Refresh mode is an approach to filling the data warehouse that employs bulk rewriting of the target data at periodic intervals.
Answer: TRUE
LO: 9.11: Describe the four steps and activities of the Extract, Transform, and Load (ETL) process for data integration for a data warehouse.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

112) Update mode is used to create a data warehouse.
Answer: FALSE
LO: 9.11: Describe the four steps and activities of the Extract, Transform, and Load (ETL) process for data integration for a data warehouse.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

113) Bitmapped indexing is often used in a data warehouse environment.
Answer: TRUE
LO: 9.11: Describe the four steps and activities of the Extract, Transform, and Load (ETL) process for data integration for a data warehouse.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

114) Loading data into the warehouse typically means appending new rows to tables in the warehouse as well as updating existing rows with new data.
Answer: TRUE
LO: 9.11: Describe the four steps and activities of the Extract, Transform, and Load (ETL) process for data integration for a data warehouse.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

115) A method of capturing data in a snapshot at a point in time is called static extract.
Answer: TRUE
LO: 9.11: Describe the four steps and activities of the Extract, Transform, and Load (ETL) process for data integration for a data warehouse.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

116) An approach in which only changes in the source data are written to the data warehouse is called refresh mode.
Answer: FALSE
LO: 9.11: Describe the four steps and activities of the Extract, Transform, and Load (ETL) process for data integration for a data warehouse.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

117) Data transformation is not an important part of the data reconciliation process.
Answer: FALSE
LO: 9.12: Explain the various forms of data transformations needed to prepare data for a data warehouse.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

118) Joining is often complicated by problems such as errors in source data.
Answer: TRUE
LO: 9.12: Explain the various forms of data transformations needed to prepare data for a data warehouse.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

119) The process of transforming data from detailed to summary levels is called normalization.
Answer: FALSE
LO: 9.12: Explain the various forms of data transformations needed to prepare data for a data warehouse.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

120) The process of partitioning data according to predefined criteria is called aggregation.
Answer: FALSE
LO: 9.12: Explain the various forms of data transformations needed to prepare data for a data warehouse.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

121) The process of transforming data from a detailed to a summary level is called selection.
Answer: FALSE
LO: 9.12: Explain the various forms of data transformations needed to prepare data for a data warehouse.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

Modern Database Management, 13e **(Hoffer)**
Chapter 10 Big Data Technologies

1) At a basic level, analytics refers to:
A) collecting data.
B) conducting a needs analysis.
C) analysis and interpretation of data.
D) normalizing data.
Answer: C
LO: 10.2: Describe the reasons why data management technologies and approaches have expanded beyond relational databases and data warehousing technologies.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

2) Big data includes:
A) large volumes of data with many different data types that are processed at very high speeds.
B) large volumes of data entry with a single data type processed at very high speeds.
C) large volumes of entity relationship diagrams (ERD) with many different data types that are processed at very high speeds.
D) large volumes of entity relationship diagrams (ERD) with a single data type processed at very high speeds.
Answer: A
LO: 10.2: Describe the reasons why data management technologies and approaches have expanded beyond relational databases and data warehousing technologies.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

3) _____ generally processes the largest quantities of data.
A) Operational databases
B) Transaction processing
C) Big data
D) Data marts
Answer: B
LO: 10.2: Describe the reasons why data management technologies and approaches have expanded beyond relational databases and data warehousing technologies.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

4) Big data requires effectively processing:
A) a single data type (numeric).
B) two data types (text and numeric).
C) many data types.
D) a single data type (text).
Answer: C
LO: 10.2: Describe the reasons why data management technologies and approaches have expanded beyond relational databases and data warehousing technologies.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

5) Big data:
A) requires a normalized dataset to 3rd Normal Form.
B) does not require a strictly defined data model.
C) requires a strictly defined schema.
D) requires a normalized dataset to BCNF.
Answer: B
LO: 10.2: Describe the reasons why data management technologies and approaches have expanded beyond relational databases and data warehousing technologies.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

6) According to your text, NoSQL stands for:
A) Numbered SQL.
B) No SQL.
C) Not Only SQL.
D) Numeric Only SQL.
Answer: C
LO: 10.3: List the main categories of NoSQL database management systems.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

7) NoSQL includes data storage and retrieval:
A) based on the relational model.
B) based on normalized tables.
C) not based on the relational model.
D) not based on data.
Answer: C
LO: 10.3: List the main categories of NoSQL database management systems.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

8) NoSQL focuses on:
A) avoidance of replication of data.
B) minimizing storage space.
C) normalized data.
D) flexibility.
Answer: D
LO: 10.3: List the main categories of NoSQL database management systems.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

9) NoSQL systems allow _____ by incorporating commodity servers that can be easily added to the architectural solution.
A) scaling down
B) scaling out
C) scaling up
D) scaling over
Answer: B
LO: 10.3: List the main categories of NoSQL database management systems.
Difficulty: Difficult
Classification: Concept
AACSB: Information Technology

10) The NoSQL model that includes a simple pair of a key and an associated collection of values is called a:
A) key-value store.
B) document store.
C) wide-column store.
D) graph database.
Answer: A
LO: 10.3: List the main categories of NoSQL database management systems.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

11) The NoSQL model that incorporates 'column families' is called a:
A) key-value store.
B) document store.
C) wide-column store.
D) column-SQL database.
Answer: C
LO: 10.3: List the main categories of NoSQL database management systems.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

12) The NoSQL model that is specifically designed to maintain information regarding the relationships (often real-world instances of entities) between data items is called a:
A) key-value store.
B) document store.
C) wide-column store.
D) graph-oriented database.
Answer: D
LO: 10.3: List the main categories of NoSQL database management systems.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

13) Data in MongoDB is represented in:
A) JSON.
B) BSON.
C) CSON.
D) SON.
Answer: B
LO: 10.4: Understand the basics of MongoDB as an example of a NoSQL database management system,
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

14) MongoDB databases are composed of:
A) collections.
B) tables.
C) rowsets.
D) columns.
Answer: A
LO: 10.4: Understand the basics of MongoDB as an example of a NoSQL database management system,
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

15) _____ is the most popular key-value store NoSQL database management system.
A) Access
B) Apache Cassandra
C) Neo4j
D) Redis
Answer: D
LO: 10.5: Choose between relational databases and various types of NoSQL databases depending on the organization's data management needs.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

16) An organization that requires a sole focus on performance with the ability for keys to include strings, hashes, lists, and sorted sets would select _____ database management system.
A) Access
B) Excel Spreadsheet
C) Neo4j
D) Redis
Answer: D
LO: 10.5: Choose between relational databases and various types of NoSQL databases depending on the organization's data management needs.
Difficulty: Difficult
Classification: Application
AACSB: Information Technology

17) An organization that requires a graph database that is highly scalable would select the _____ database management system.
A) Access
B) Excel Spreadsheet
C) Neo4j
D) Redis
Answer: C
LO: 10.5: Choose between relational databases and various types of NoSQL databases depending on the organization's data management needs.
Difficulty: Difficult
Classification: Application
AACSB: Information Technology

18) An organization that decides to adopt the most popular NoSQL database management system would select:
A) Access.
B) MongoDB.
C) Neo4j.
D) Redis.
Answer: B
LO: 10.5: Choose between relational databases and various types of NoSQL databases depending on the organization's data management needs.
Difficulty: Moderate
Classification: Application
AACSB: Information Technology

19) Apache Cassandra is a leading producer of _____ NoSQL database management systems.
A) key-value store
B) wide-column
C) relational
D) graph
Answer: B
LO: 10.5: Choose between relational databases and various types of NoSQL databases depending on the organization's data management needs.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

20) The three 'v's' commonly associated with big data include:
A) viewable, volume, and variety.
B) volume, variety, and velocity.
C) verified, variety, and velocity.
D) vigilant, viewable, and verified.
Answer: B
LO: 10.6: Describe the meaning of big data and the demands big data will place on data management technology.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

21) _____ includes NoSQL accommodation of various data types.
A) Velocity
B) Vigilant
C) Verified
D) Variety
Answer: D
LO: 10.6: Describe the meaning of big data and the demands big data will place on data management technology.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

22) _____ includes the value of speed in a NoSQL database.
A) Velocity
B) Vigilant
C) Verified
D) Variety
Answer: A
LO: 10.6: Describe the meaning of big data and the demands big data will place on data management technology.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

23) _____ includes concern about data quality issues.
A) Velocity
B) Vigilant
C) Veracity
D) Variety
Answer: C
LO: 10.6: Describe the meaning of big data and the demands big data will place on data management technology.
Difficulty: Difficult
Classification: Concept
AACSB: Information Technology

24) When reporting and analysis organization of the data is determined when the data is used is called a(n):
A) entity relationship diagram.
B) schema binding.
C) schema on read.
D) cognitive schema.
Answer: C
LO: 10.6: Describe the meaning of big data and the demands big data will place on data management technology.
Difficulty: Difficult
Classification: Concept
AACSB: Information Technology

25) When a data repository (including internal and external data) does NOT follow a predefined schema, this is called a:
A) data dump.
B) data ocean.
C) data lake.
D) data stream.
Answer: C
LO: 10.6: Describe the meaning of big data and the demands big data will place on data management technology.
Difficulty: Difficult
Classification: Concept
AACSB: Information Technology

26) Although volume, variety, and velocity are considered the initial three v dimensions, two additional Vs of big data were added and include:
A) veracity and verified.
B) volume and verified.
C) verified and valuable.
D) veracity and value.
Answer: D
LO: 10.6: Describe the meaning of big data and the demands big data will place on data management technology.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

27) NoSQL systems enable automated _____ to allow distribution of the data among multiple nodes to allow servers to operate independently on the data located on it.
A) sharing
B) sharding
C) SQL
D) mongo
Answer: B
LO: 10.6: Describe the meaning of big data and the demands big data will place on data management technology.
Difficulty: Difficult
Classification: Concept
AACSB: Information Technology

28) The Hadoop framework consists of the _____ algorithm to solve large scale problems.
A) MapSystem
B) MapReduce
C) MapCluster
D) MapComponent
Answer: B
LO: 10.7: List the key technology components of a typical Hadoop environment and describe their uses.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

29) _____ is an important scripting language to help reduce the complexity of MapReduce.
A) Pig
B) Horse
C) Dog
D) Cat
Answer: A
LO: 10.7: List the key technology components of a typical Hadoop environment and describe their uses.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

30) Hive is a(n) _____ data warehouse software.
A) Oracle
B) Microsoft
C) Macintosh
D) Apache
Answer: D
LO: 10.7: List the key technology components of a typical Hadoop environment and describe their uses.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

31) The Hadoop Distributed File System (HDFS) is the foundation of a _____ infrastructure of Hadoop.
A) relational database management system
B) DBBMS
C) Java
D) data management
Answer: D
LO: 10.7: List the key technology components of a typical Hadoop environment and describe their uses.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

32) An organization using HDFS realizes that hardware failure is a(n):
A) norm.
B) irregularity.
C) anomaly.
D) inconsistency.
Answer: A
LO: 10.7: List the key technology components of a typical Hadoop environment and describe their uses.
Difficulty: Moderate
Classification: Application
AACSB: Information Technology

33) With HDFS it is less expensive to move the execution of computation to data than to move the:
A) data to hardware.
B) data to systems analysis.
C) data to computation.
D) data to processes.
Answer: C
LO: 10.7: List the key technology components of a typical Hadoop environment and describe their uses.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

34) It is true that in an HDFS cluster the NameNode is the:
A) large number of slaves.
B) single master server.
C) language library.
D) business intelligence.
Answer: B
LO: 10.7: List the key technology components of a typical Hadoop environment and describe their uses.
Difficulty: Difficult
Classification: Concept
AACSB: Information Technology

35) It is true that in an HDFS cluster the DataNodes are the:
A) large number of slaves.
B) single master servers.
C) language libraries.
D) business intelligences.
Answer: A
LO: 10.7: List the key technology components of a typical Hadoop environment and describe their uses.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

36) The primary use of Pig is to:
A) transform raw data into a format that is useful for analysis.
B) query large databases.
C) create large databases.
D) create data warehouses.
Answer: A
LO: 10.8: Understand the basics of Pig and Hive
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

37) Hive uses _____ to query data.
A) SQL
B) HiveQL
C) BeesNest
D) Honeyquery
Answer: B
LO: 10.8: Understand the basics of Pig and Hive
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

38) Big data allows for two different data types (text and numeric).
Answer: FALSE
LO: 10.2: Describe the reasons why data management technologies and approaches have expanded beyond relational databases and data warehousing technologies.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

39) The original three 'v's' attributed to big data include volume, variety, and velocity.
Answer: TRUE
LO: 10.2: Describe the reasons why data management technologies and approaches have expanded beyond relational databases and data warehousing technologies.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

40) Value (related to the five 'v's' of big data) addresses the pursuit of a meaningful goal.
Answer: TRUE
LO: 10.2: Describe the reasons why data management technologies and approaches have expanded beyond relational databases and data warehousing technologies.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

41) The 'schema on read' approach often incorporates JSON or XML.
Answer: TRUE
LO: 10.2: Describe the reasons why data management technologies and approaches have expanded beyond relational databases and data warehousing technologies.
Difficulty: Difficult
Classification: Concept
AACSB: Information Technology

42) Structured Query Language (SQL) is a set of methodologies, processes, architectures, and technologies that transform raw data into meaningful information.
Answer: FALSE
LO: 10.2: Describe the reasons why data management technologies and approaches have expanded beyond relational databases and data warehousing technologies.
Difficulty: Difficult
Classification: Concept
AACSB: Information Technology

43) NoSQL stands for 'Not only SQL.'
Answer: TRUE
LO: 10.3: List the main categories of NoSQL database management systems.
Difficulty: Difficult
Classification: Concept
AACSB: Information Technology

44) NoSQL focuses on avoidance of replication and minimizing storage space.
Answer: FALSE
LO: 10.3: List the main categories of NoSQL database management systems.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

45) NoSQL databases DO NOT support ACID (atomicity, consistency, isolation, and durability).
Answer: TRUE
LO: 10.3: List the main categories of NoSQL database management systems.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

46) A business owner that needs carefully normalized tables would likely need a relational database instead of a NoSQL database.
Answer: TRUE
LO: 10.3: List the main categories of NoSQL database management systems.
Difficulty: Moderate
Classification: Application
AACSB: Information Technology

47) Transaction processing and management reporting tend to fit big data databases better than relational databases.
Answer: FALSE
LO: 10.3: List the main categories of NoSQL database management systems.
Difficulty: Moderate
Classification: Application
AACSB: Information Technology

48) Economies of storage indicate data storage costs increase every year.
Answer: FALSE
LO: 10.3: List the main categories of NoSQL database management systems.
Difficulty: Moderate
Classification: Application
AACSB: Information Technology

49) Word processing documents are commonly stored in a 'document store' NoSQL database model.
Answer: FALSE
LO: 10.3: List the main categories of NoSQL database management systems.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

50) JSON is commonly used in conjunction with the 'document store' NoSQL database model.
Answer: TRUE
LO: 10.3: List the main categories of NoSQL database management systems.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

51) Graph-oriented databases are designed to maintain information regarding the relationships between data items.
Answer: TRUE
LO: 10.3: List the main categories of NoSQL database management systems.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

52) Apache Cassandra is a wide-column NoSQL database management system.
Answer: TRUE
LO: 10.5: Choose between relational databases and various types of NoSQL databases depending on the organization's data management needs.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

53) Neo4j is a wide-column NoSQL database management system developed by Oracle.
Answer: FALSE
LO: 10.5: Choose between relational databases and various types of NoSQL databases depending on the organization's data management needs.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

54) MapReduce is an algorithm for massive parallel processing utilized by Hadoop.
Answer: TRUE
LO: 10.5: Choose between relational databases and various types of NoSQL databases depending on the organization's data management needs.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

55) MongoDB is a proprietary NoSQL database management system created by Oracle.
Answer: FALSE
LO: 10.5: Choose between relational databases and various types of NoSQL databases depending on the organization's data management needs.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

56) The target market for Hadoop is small to medium companies using local area networks.
Answer: FALSE
LO: 10.5: Choose between relational databases and various types of NoSQL databases depending on the organization's data management needs.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

57) HP HAVEn integrates HP technologies with open source big data technologies.
Answer: TRUE
LO: 10.5: Choose between relational databases and various types of NoSQL databases depending on the organization's data management needs.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

58) HBASE is a wide-column store database that runs on top of HDFS (modeled after Google).
Answer: TRUE
LO: 10.5: Choose between relational databases and various types of NoSQL databases depending on the organization's data management needs.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

59) Collect everything is a characteristic of a data lake.
Answer: TRUE
LO: 10.6: Describe the meaning of big data and the demands big data will place on data management technology.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

60) The dive in anywhere characteristic of a data lake overrides constraints related to confidentiality.
Answer: FALSE
LO: 10.6: Describe the meaning of big data and the demands big data will place on data management technology.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

61) Server logs are considered a big data variety data type.
Answer: TRUE
LO: 10.6: Describe the meaning of big data and the demands big data will place on data management technology.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

62) The schema on write and schema on read are considered synonymous approaches.
Answer: FALSE
LO: 10.6: Describe the meaning of big data and the demands big data will place on data management technology.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

63) The philosophical underpinnings of big data are based on schema on write.
Answer: FALSE
LO: 10.6: Describe the meaning of big data and the demands big data will place on data management technology.
Difficulty: Difficult
Classification: Concept
AACSB: Information Technology

64) Big data databases tend to sacrifice consistency for availability.
Answer: TRUE
LO: 10.6: Describe the meaning of big data and the demands big data will place on data management technology.
Difficulty: Difficult
Classification: Concept
AACSB: Information Technology

65) Hive creates MapReduce jobs and executes them on a Hadoop Cluster.
Answer: TRUE
LO: 10.8: Understand the basics of Pig and Hive
Difficulty: Difficult
Classification: Concept
AACSB: Information Technology

Modern Database Management, 13e **(Hoffer)**
Chapter 12 Data and Database Administration with Focus on Data Quality

1) Which of the following is NOT true of poor data and/or database administration?
A) Data timing problems
B) Multiple entity definitions
C) Unknown meanings of stored data

D) Maintaining a secure server
Answer: D
LO: 12.2: List several major functions of data administration and of database administration.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

2) _____ is a technical function responsible for database design, security, and disaster recovery.
A) Data administration
B) Database administration
C) Tech support
D) Operations
Answer: B
LO: 12.2: List several major functions of data administration and of database administration.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

3) Which of the following functions do cost/benefit models?
A) Database planning
B) Database analysis
C) Database design
D) Operations
Answer: A
LO: 12.2: List several major functions of data administration and of database administration.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

4) Which of the following functions design integrity controls?
A) Database planning
B) Database analysis
C) Database implementation
D) Database design
Answer: D
LO: 12.3: Describe the changing roles of the data administrator and database administrator in the current business environment.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

5) Which of the following functions model business rules?
A) Database planning
B) Database analysis
C) Database design
D) Operations
Answer: B
LO: 12.3: Describe the changing roles of the data administrator and database administrator in the current business environment.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

6) An open source DBMS is:
A) a free source code RBMS that provides the functionality of an SQL-compliant DBMS.
B) a beta release of a commercial RDBMS.
C) an object-oriented database management system.
D) source code for a commercial RDBMS.
Answer: A
LO: 12.3: Describe the changing roles of the data administrator and database administrator in the current business environment.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

7) Data governance can be defined as:
A) a means to slow down the speed of data.
B) high-level organizational groups and processes that oversee data stewardship.
C) a government task force for defining data quality.
D) a means to increase the speed of data.
Answer: B
LO: 12.4: Describe the importance of data governance and identify key goals of a data governance program.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

8) Data quality ROI stands for:
A) return on installation.
B) risk of incarceration.
C) rough outline inclusion.
D) rate of installation.
Answer: B
LO: 12.5: Describe the importance of data quality and list several measures to improve quality.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

9) Data quality is important for all of the following reasons EXCEPT:
A) it minimizes project delay.
B) it aids in making timely business decisions.
C) it provides a stream of profit.
D) it helps to expand the customer base.
Answer: C
LO: 12.5: Describe the importance of data quality and list several measures to improve quality.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

10) Quality data can be defined as being:
A) unique.
B) inaccurate.
C) historical.
D) precise.
Answer: A
LO: 12.5: Describe the importance of data quality and list several measures to improve quality.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

11) Conformance means that:
A) data have been transformed.
B) data are stored, exchanged, or presented in a format that is specified by its metadata.
C) data are stored in a way to expedite retrieval.
D) data is a harbinger.
Answer: B
LO: 12.6: Define the characteristics of quality data.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

12) Data that are accurate, consistent, and available in a timely fashion are considered:
A) Oracle-based.
B) Microsoft-based.
C) high-quality.
D) low-quality.
Answer: C
LO: 12.6: Define the characteristics of quality data.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

13) One characteristic of quality data which pertains to the expectation for the time between when data are expected and when they are available for use is:
A) currency.
B) consistency.
C) referential integrity.
D) timeliness.
Answer: D
LO: 12.6: Define the characteristics of quality data.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

14) External data sources present problems for data quality because:
A) data are not always available.
B) there is a lack of control over data quality.
C) there are poor data capture controls.
D) data are unformatted.
Answer: B
LO: 12.7: Describe the reasons for poor-quality data in organizations.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

15) Data quality problems can cascade when:
A) data are not deleted properly.
B) data are copied from legacy systems.
C) there is redundant data storage and inconsistent metadata.
D) there are data entry problems.
Answer: B
LO: 12.7: Describe the reasons for poor-quality data in organizations.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

16) Getting poor data from a supplier is a(n) _____ reason for deteriorated data quality.
A) external data source
B) inconsistent metadata
C) data entry problem
D) lack of organizational commitment
Answer: A
LO: 12.7: Describe the reasons for poor-quality data in organizations.
Difficulty: Easy
Classification: Application
AACSB: Information Technology

17) Including data capture controls (i.e., dropdown lists) helps reduce _____ deteriorated data problems.
A) external data source
B) inconsistent metadata
C) data entry
D) lack of organizational commitment
Answer: C
LO: 12.7: Describe the reasons for poor-quality data in organizations.
Difficulty: Easy
Classification: Application
AACSB: Information Technology

18) The best place to improve data entry across all applications is:
A) in the users.
B) in the level of organizational commitment.
C) in the database definitions.
D) in the data entry operators.
Answer: C
LO: 12.8: Describe a program for improving data quality in organizations, including data stewardship.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

19) Which of the following are key steps in a data quality program?
A) Avoid a data quality audit
B) Apply TQM principles and practices
C) Do not allow outside data
D) Keep all data on one server
Answer: B
LO: 12.8: Describe a program for improving data quality in organizations, including data stewardship.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

20) One simple task of a data quality audit is to:
A) interview all users.
B) statistically profile all files.
C) load all data into a data warehouse.
D) establish quality metrics.
Answer: B
LO: 12.8: Describe a program for improving data quality in organizations, including data stewardship.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

21) One way to improve the data capture process is to:
A) allow all data to be entered manually.
B) provide little or no training to data entry operators.
C) check entered data immediately for quality against data in the database.
D) not use any automatic data entry routines.
Answer: C
LO: 12.8: Describe a program for improving data quality in organizations, including data stewardship.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

22) TQM stands for:
A) Thomas Quinn Mann, a famous data quality innovator.
B) Total Quality Manipulation.
C) Transforming Quality Management.
D) Total Quality Management.
Answer: D
LO: 12.8: Describe a program for improving data quality in organizations, including data stewardship.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

23) The methods to ensure the quality of data across various subject areas are called:
A) Variable Data Management.
B) Master Data Management.
C) Joint Data Management.
D) Managed Data Management.
Answer: B
LO: 12.9: Describe the purpose and role of master data management.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

24) All of the following are popular architectures for Master Data Management EXCEPT:
A) identity registry.
B) integration hub.
C) persistent.
D) normalization.
Answer: D
LO: 12.9: Describe the purpose and role of master data management.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

25) In the _____ approach, one consolidated record is maintained, and all applications draw on that one actual "golden" record.
A) persistent
B) identity registry
C) federated
D) integration hub
Answer: A
LO: 12.9: Describe the purpose and role of master data management.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

26) In the _____ approach, one consolidated record is maintained from which all applications draw data.
A) persnickity
B) cautious
C) persistent
D) data-oriented
Answer: C
LO: 12.9: Describe the purpose and role of master data management.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

27) The data administrator takes responsibility for the overall management of data resources.
Answer: TRUE
LO: 12.2: List several major functions of data administration and of database administration.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

28) Databases are generally the property of a single department within an organization.
Answer: FALSE
LO: 12.2: List several major functions of data administration and of database administration.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

29) The role of database administration is typically a more hands-on, physical involvement with the management of databases.
Answer: TRUE
LO: 12.2: List several major functions of data administration and of database administration.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

30) Specifications for transactions do not need to be reviewed quickly.
Answer: FALSE
LO: 12.2: List several major functions of data administration and of database administration.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

31) A high-level function that is responsible for the overall management of data resources in an organization is called database administration.
Answer: FALSE
LO: 12.2: List several major functions of data administration and of database administration.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

32) Specifying database access policies is done during the database implementation phase.
Answer: TRUE
LO: 12.2: List several major functions of data administration and of database administration.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

33) Open source DBMS are free software that provide the core functionality of an SQL compliant DBMS.
Answer: TRUE
LO: 12.3: Describe the changing roles of the data administrator and database administrator in the current business environment.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

34) Open source software always comes with complete documentation.
Answer: FALSE
LO: 12.3: Describe the changing roles of the data administrator and database administrator in the current business environment.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

35) Quality data are not essential for well-run organizations.
Answer: FALSE
LO: 12.4: Describe the importance of data governance and identify key goals of a data governance program.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

36) A data steward is a person assigned the responsibility of ensuring the organizational applications properly support the organization's enterprise goals for data quality.
Answer: TRUE
LO: 12.4: Describe the importance of data governance and identify key goals of a data governance program.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

37) A data governance committee is always made up of high-ranking government officials.
Answer: FALSE
LO: 12.4: Describe the importance of data governance and identify key goals of a data governance program.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

38) Dirty data saves work for information systems projects.
Answer: FALSE
LO: 12.5: Describe the importance of data quality and list several measures to improve quality.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

39) Data quality is essential for SOX and Basel II compliance.
Answer: TRUE
LO: 12.5: Describe the importance of data quality and list several measures to improve quality.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

40) Dirty data can cause delays and extra work on information systems projects.
Answer: TRUE
LO: 12.5: Describe the importance of data quality and list several measures to improve quality.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

41) Quality data does not have to be unique.
Answer: FALSE
LO: 12.5: Describe the importance of data quality and list several measures to improve quality.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

42) Completeness means that all data that are needed are present.
Answer: TRUE
LO: 12.6: Define the characteristics of quality data.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

43) Retention refers to the amount of data that is not purged periodically from tables.
Answer: FALSE
LO: 12.6: Define the characteristics of quality data.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

44) Generally, records in a customer file never become obsolete.
Answer: FALSE
LO: 12.6: Define the characteristics of quality data.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

45) Completeness means that all data that must have a value does not have a value.
Answer: FALSE
LO: 12.6: Define the characteristics of quality data.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

46) Data which arrive via XML and B2B channels is always guaranteed to be accurate.
Answer: FALSE
LO: 12.7: Describe the reasons for poor-quality data in organizations.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

47) The uncontrolled proliferation of spreadsheets, databases, and repositories leads to data quality problems.
Answer: TRUE
LO: 12.7: Describe the reasons for poor-quality data in organizations.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

48) Lack of organizational commitment is a potential reason for an organization's deteriorated data quality.
Answer: TRUE
LO: 12.7: Describe the reasons for poor-quality data in organizations.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

49) A data quality audit helps an organization understand the extent and nature of data quality problems.
Answer: TRUE
LO: 12.8: Describe a program for improving data quality in organizations, including data stewardship.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

50) Conformance refers to whether the data is stored, exchanged, or presented in a format that is as specified by its metadata.
Answer: TRUE
LO: 12.8: Describe a program for improving data quality in organizations, including data stewardship.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

51) A review will thoroughly review all process controls on data entry and maintenance.
Answer: FALSE
LO: 12.8: Describe a program for improving data quality in organizations, including data stewardship.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

52) Improving data capture process is a fundamental step in data quality improvement.
Answer: TRUE
LO: 12.8: Describe a program for improving data quality in organizations, including data stewardship.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

53) A data expeditor is a person assigned the responsibility of ensuring that organizational applications properly support the organization's enterprise goals of data quality.
Answer: FALSE
LO: 12.8: Describe a program for improving data quality in organizations, including data stewardship.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

54) Sound data modeling is a central ingredient of a data quality program.
Answer: TRUE
LO: 12.8: Describe a program for improving data quality in organizations, including data stewardship.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology

55) A data stewardship program does not help to involve the organization in data quality.
Answer: FALSE
LO: 12.8: Describe a program for improving data quality in organizations, including data stewardship.
Difficulty: Moderate
Classification: Concept
AACSB: Information Technology

56) Total quality management (TQM) focuses on defect correction rather than defect prevention.
Answer: FALSE
LO: 12.8: Describe a program for improving data quality in organizations, including data stewardship.
Difficulty: Difficult
Classification: Concept
AACSB: Information Technology

57) Master data management is the disciplines, technologies, and methods to ensure the currency, meaning, and quality of data within one subject area.
Answer: FALSE
LO: 12.9: Describe the purpose and role of master data management.
Difficulty: Easy
Classification: Concept
AACSB: Information Technology