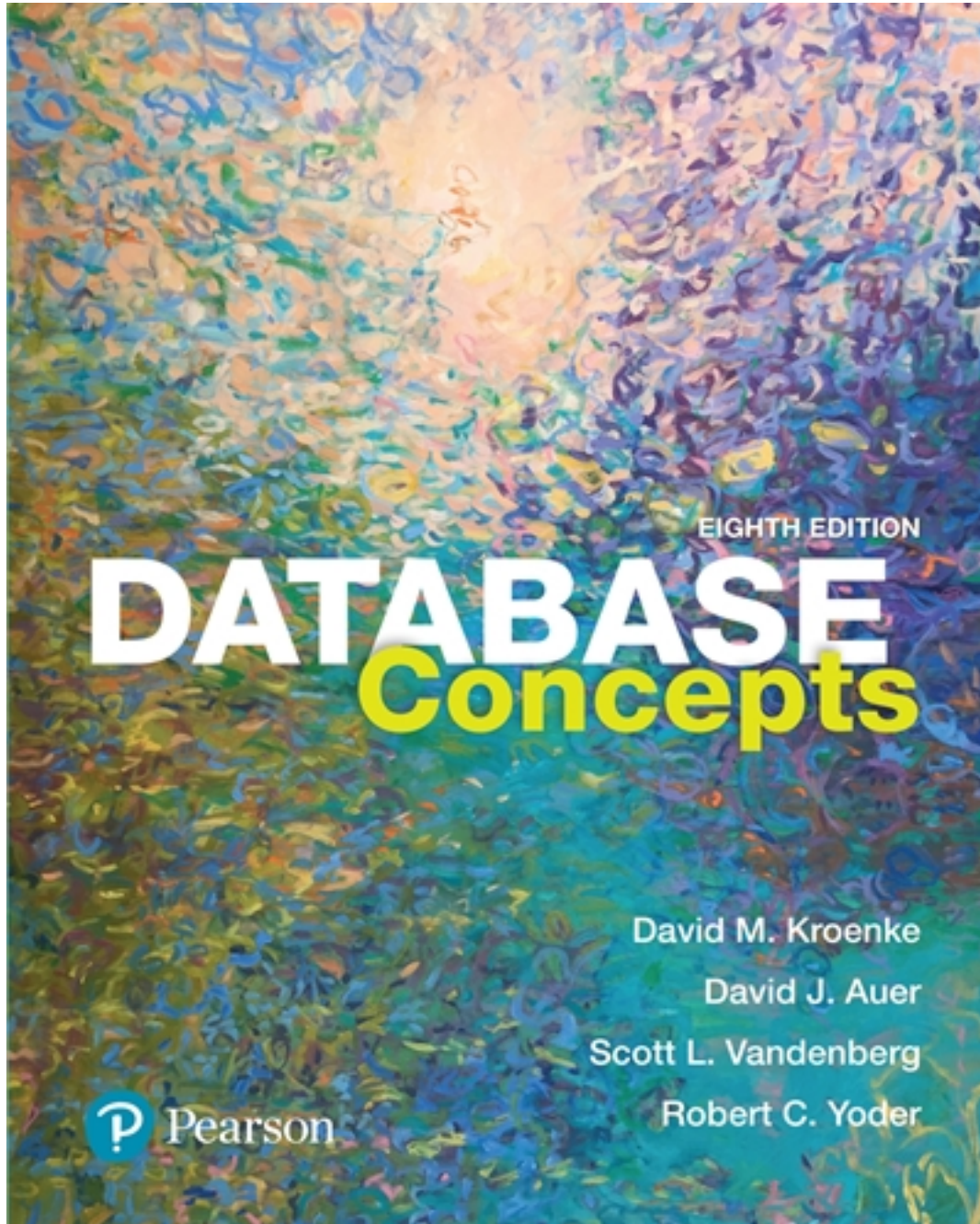


Test Bank for Database Concepts 8th Edition by Kroenke

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Test Bank

Database Concepts, 8e (Kroenke)
Chapter 2 The Relational Model

1) A key must be unique.

Answer: FALSE

Diff: 1 Page Ref: 74

AACSB: Information Technology

Chapter Obj: Learn basic relational terminology

Classification: Concept

2) Ensuring that every value of a foreign key matches a value of the corresponding primary key is an example of a referential integrity constraint.

Answer: TRUE

Diff: 1 Page Ref: 80

AACSB: Information Technology

Chapter Obj: Learn basic relational terminology

Classification: Concept

3) A double arrow notation, $A \twoheadrightarrow B$, is used to indicate a multivalued dependency.

Answer: TRUE

Diff: 2 Page Ref: 96

AACSB: Information Technology

Chapter Obj: Learn basic relational terminology

Classification: Concept

4) Microsoft Access forms can only contain data from one table.

Answer: FALSE

Diff: 1 Page Ref: 115

AACSB: Information Technology

Chapter Obj: Learn basic relational terminology

Classification: Concept

5) Which of the following terms is synonymous with "tuple"?

A) Attribute

B) Table

C) Field

D) Row

E) Relation

Answer: D

Diff: 1 Page Ref: 73

AACSB: Information Technology

Chapter Obj: Learn basic relational terminology

Classification: Concept

6) Which of the following is not true about null values?

- A) A null value can mean that the value is unknown.
- B) A null value is ambiguous.
- C) A null value can mean that the value is known to be blank.
- D) A null value can mean that no value for the field is appropriate.
- E) Null values cannot be avoided.

Answer: E

Diff: 2 Page Ref: 83-84

AACSB: Information Technology

Chapter Obj: Learn basic relational terminology

Classification: Concept

7) Explain the terms *relation*, *tuple*, and *attribute*.

Answer: The terms *relation*, *tuple*, and *attribute* are used primarily by database theoreticians.

These terms are synonymous with the terms *table*, *row*, and *column*, respectively, in regards to a relational database. They are also equivalent to the terms *file*, *record*, and *field*, which tend to be used by many traditional data processing professionals.

Diff: 1 Page Ref: 73

AACSB: Information Technology

Chapter Obj: Learn basic relational terminology

Classification: Concept

8) Explain the possible interpretations of a null value.

Answer: The problem with allowing null values in a table is that the null value is open to three different interpretations. First, a null value in a field may mean that no value is appropriate for the field for the given record. Second, a null value may mean that the value of that field is known to be blank for the given record. Third, a null value may mean that the value of that field is not known for the given record.

Diff: 1 Page Ref: 83-84

AACSB: Information Technology

Chapter Obj: Learn basic relational terminology

Classification: Concept

9) While the relational model for databases appears to hold much promise, few commercial databases have implemented it.

Answer: FALSE

Diff: 1 Page Ref: 70

AACSB: Information Technology

Chapter Obj: Learn the conceptual foundation of the relational model

Classification: Concept

10) Every cell in a relation can hold only a single value.

Answer: TRUE

Diff: 1 Page Ref: 71

AACSB: Information Technology

Chapter Obj: Learn the conceptual foundation of the relational model

Classification: Concept

11) In the relational model, each row of a table contains data that represents an attribute of the entity.

Answer: FALSE

Diff: 2 Page Ref: 71

AACSB: Information Technology

Chapter Obj: Learn the conceptual foundation of the relational model

Classification: Concept

12) Which of the following terms is synonymous with "relation"?

A) Attribute

B) Table

C) Record

D) Row

E) Tuple

Answer: B

Diff: 1 Page Ref: 70

AACSB: Information Technology

Chapter Obj: Learn the conceptual foundation of the relational model

Classification: Concept

13) _____ was the developer of the relational model for databases.

Answer: E. F. Codd

Diff: 1 Page Ref: 70

AACSB: Information Technology

Chapter Obj: Learn the conceptual foundation of the relational model

Classification: Concept

14) Although Microsoft Access is a personal database, the database tables in Access are still subject to _____ if they are not well-formed.

Answer: modification problems

Diff: 1 Page Ref: 101

AACSB: Information Technology

Chapter Obj: Learn the conceptual foundation of the relational model

Classification: Concept

15) To be considered a composite key, a key must contain at least two attributes.

Answer: TRUE

Diff: 1 Page Ref: 74

AACSB: Information Technology

Chapter Obj: Learn the meaning and importance of keys, foreign keys, and related terminology

Classification: Concept

16) Candidate keys may or may not be unique.

Answer: FALSE

Diff: 2 Page Ref: 74

AACSB: Information Technology

Chapter Obj: Learn the meaning and importance of keys, foreign keys, and related terminology

Classification: Concept

17) The primary key is used both to identify unique rows in a relation and to represent rows in relationships.

Answer: TRUE

Diff: 2 Page Ref: 75

AACSB: Information Technology

Chapter Obj: Learn the meaning and importance of keys, foreign keys, and related terminology

Classification: Concept

18) Null values can cause problems because they are ambiguous.

Answer: TRUE

Diff: 1 Page Ref: 84

AACSB: Information Technology

Chapter Obj: Learn the meaning and importance of keys, foreign keys, and related terminology

Classification: Concept

19) Which of the following is true about a key?

A) It may be unique.

B) It may be non-unique.

C) It can only identify one row.

D) Both A and B

E) None of the above

Answer: D

Diff: 1 Page Ref: 74

AACSB: Information Technology

Chapter Obj: Learn the meaning and importance of keys, foreign keys, and related terminology

Classification: Concept

20) A key that contains more than one attribute is called a(n) _____.

A) composite key

B) complex key

C) multi-key

D) n-key

E) candidate key

Answer: A

Diff: 1 Page Ref: 74

AACSB: Information Technology

Chapter Obj: Learn the meaning and importance of keys, foreign keys, and related terminology

Classification: Concept

21) A primary key is _____.

- A) not required to be unique
- B) used to represent columns in relationships
- C) a candidate key
- D) always automatically generated by the DBMS
- E) comprised of exactly one attribute

Answer: C

Diff: 2 Page Ref: 74-75

AACSB: Information Technology

Chapter Obj: Learn the meaning and importance of keys, foreign keys, and related terminology

Classification: Concept

22) A candidate key is _____.

- A) never a primary key
- B) a combination of two or more attributes
- C) is always automatically generated by the DBMS
- D) a candidate to be the primary key
- E) None of the above

Answer: D

Diff: 3 Page Ref: 74-75

AACSB: Information Technology

Chapter Obj: Learn the meaning and importance of keys, foreign keys, and related terminology

Classification: Concept

23) A(n) _____ is one or more columns of a relation that is used to identify a row.

Answer: key

Diff: 1 Page Ref: 74

AACSB: Information Technology

Chapter Obj: Learn the meaning and importance of keys, foreign keys, and related terminology

Classification: Concept

24) A key that contains two or more attributes is called a(n) _____ key.

Answer: composite

Diff: 1 Page Ref: 74

AACSB: Information Technology

Chapter Obj: Learn the meaning and importance of keys, foreign keys, and related terminology

Classification: Concept

25) The unique keys that are not chosen to be the primary key are called _____ keys.

Answer: alternate

Diff: 2 Page Ref: 75

AACSB: Information Technology

Chapter Obj: Learn the meaning and importance of keys, foreign keys, and related terminology

Classification: Concept

26) Distinguish between the primary key and a candidate key.

Answer: Both the primary key and a candidate key can uniquely identify the rows in a table. The primary key is the candidate key that is chosen by the database designer, working with the users, to uniquely identify rows and to represent relationships. Although any candidate key could, by definition, be selected to act as the primary key, the choice of primary key is often based on design decisions such as the amount of foreign key data that would be generated.

Diff: 2 Page Ref: 74

AACSB: Information Technology

Chapter Obj: Learn the meaning and importance of keys, foreign keys, and related terminology

Classification: Concept

27) Briefly describe the various tasks of the primary key.

Answer: The primary key is used for four primary tasks. First, it is used to uniquely identify the rows in a table. Second, it is used to represent rows in relationships. Third, most DBMS products use the values of the primary key to organize the storage of the relation. Finally, primary keys are used in indexes and other structures to improve performance for search operations.

Diff: 2 Page Ref: 74-75

AACSB: Information Technology

Chapter Obj: Learn the meaning and importance of keys, foreign keys, and related terminology

Classification: Concept

28) If the condition exists such that knowing the value of attribute X determines the value of attribute Y, then attribute Y is functionally dependent on attribute X.

Answer: TRUE

Diff: 1 Page Ref: 85

AACSB: Information Technology

Chapter Obj: Learn the meaning of functional dependencies

Classification: Concept

29) Given the functional dependency for the attributes of ENTITY1, $X \rightarrow (A, B, C)$, X is a candidate key for the relation ENTITY1 (A, B, C, X).

Answer: TRUE

Diff: 3 Page Ref: 87

AACSB: Information Technology

Chapter Obj: Learn the meaning of functional dependencies

Classification: Concept

30) Given the below functional dependency,

MedicineCode → (**MedicineName**, **ShelfLife**, **Manufacturer**, **Dosage**)

which of the following statements is not known to be true?

- A) MedicineCode is a determinant.
- B) MedicineName is a determinant.
- C) Manufacturer is functionally dependent on MedicineCode.
- D) ShelfLife is functionally dependent on MedicineCode.
- E) MedicineCode is a candidate key of the relation MEDICINE (MedicineName, ShelfLife, Manufacturer, Dosage).

Answer: B

Diff: 2 Page Ref: 85-86

AACSB: Information Technology

Chapter Obj: Learn the meaning of functional dependencies

Classification: Concept

31) Which of the following functional dependency diagrams accurately represents the following situation:

- A campus has many buildings.
- Each building has a unique name.
- Each building has many rooms.
- All rooms in any given building are numbered sequentially starting at "101."
- Each room has a certain capacity, although many rooms in the same building or different buildings may have the same capacity.
- Each room is assigned to a single department.
- A department may have many rooms in one or more buildings, each with the same or different capacities.

- A) BuildingName → (RoomNumber, Capacity, Department)
- B) RoomNumber → (BuildingName, Department, Capacity)
- C) (Department, Capacity) → (BuildingName, RoomNumber)
- D) (BuildingName, Capacity) → (Department, RoomNumber)
- E) (BuildingName, RoomNumber) → (Capacity, Department)

Answer: E

Diff: 3 Page Ref: 85-86

AACSB: Information Technology

Chapter Obj: Learn the meaning of functional dependencies

Classification: Concept

32) The relationship between two attributes that denotes that if the value of the first attribute is known, then the value of the second attribute can be determined, is called a(n) _____.

Answer: functional dependency

Diff: 2 Page Ref: 85-86

AACSB: Information Technology

Chapter Obj: Learn the meaning of functional dependencies

Classification: Concept

33) The key that has been designated the _____ key of a relation functionally determines all the other attributes in the relation.

Answer: primary

Diff: 2 Page Ref: 87

AACSB: Information Technology

Chapter Obj: Learn the meaning of functional dependencies

Classification: Concept

34) Explain the concept of a functional dependency.

Answer: A functional dependency is a relationship that exists among the attributes of a relation, such that if the value of one attribute or group of attributes is known, the value of another attribute or group of attributes can be determined. In a functional dependency, the attribute(s) whose value determines the value of the other attribute is called the "determinant." The other attribute, whose value is determined by the determinant, is said to be functionally dependent on the determinant.

Diff: 2 Page Ref: 85-86

AACSB: Information Technology

Chapter Obj: Learn the meaning of functional dependencies

Classification: Concept

35) Surrogate key values have no meaning to the users.

Answer: TRUE

Diff: 1 Page Ref: 79

AACSB: Information Technology

Chapter Obj: Learn the purpose and use of surrogate keys

Classification: Concept

36) Since surrogate keys are used to uniquely identify rows, their values are normally displayed prominently on all forms and reports for the users to see.

Answer: FALSE

Diff: 2 Page Ref: 79

AACSB: Information Technology

Chapter Obj: Learn the purpose and use of surrogate keys

Classification: Concept

37) The use of surrogate keys usually complicates application programming since most DBMS products require the application program to generate surrogate key values.

Answer: FALSE

Diff: 2 Page Ref: 79

AACSB: Information Technology

Chapter Obj: Learn the purpose and use of surrogate keys

Classification: Concept

38) A surrogate key may be appropriate under which of the following circumstances?

- A) The primary key is not unique.
- B) The primary key is numeric.
- C) The available candidate keys would be prone to typographical errors.
- D) The available candidate keys have little meaning to the users.
- E) The relation only has one attribute.

Answer: C

Diff: 2 Page Ref: 79

AACSB: Information Technology

Chapter Obj: Learn the purpose and use of surrogate keys

Classification: Concept

39) Which of the following is not true of surrogate keys?

- A) They are meaningful to the users.
- B) They are numeric.
- C) They are usually generated by the DBMS.
- D) They are unique.
- E) They are usually hidden on forms and reports.

Answer: A

Diff: 2 Page Ref: 79

AACSB: Information Technology

Chapter Obj: Learn the purpose and use of surrogate keys

Classification: Concept

40) In SQL Server, the starting value of a surrogate key is called the _____.

- A) identity
- B) identity increment
- C) identity Start
- D) identity Seed
- E) identity property

Answer: D

Diff: 3 Page Ref: 79

AACSB: Information Technology

Chapter Obj: Learn the purpose and use of surrogate keys

Classification: Concept

41) A(n) _____ is a unique, numeric value that is appended to the relation to serve as the primary key.

Answer: surrogate key

Diff: 2 Page Ref: 79

AACSB: Information Technology

Chapter Obj: Learn the purpose and use of surrogate keys

Classification: Concept

42) Explain the concept of a surrogate key.

Answer: A surrogate key is an artificial key that is created to act as the primary key for a relation. The surrogate key is a unique, numeric value that is appended to the relation. Surrogate keys are used in situations when no suitable primary key exists within the user data, or when all available primary keys within the data are too cumbersome for an efficient design. Surrogate key values have no meaning to the users and are normally hidden on all forms, reports, and displays. Most DBMS products have the ability to automatically generate values for surrogate keys as needed.

Diff: 1 Page Ref: 79

AACSB: Information Technology

Chapter Obj: Learn the purpose and use of surrogate keys

Classification: Concept

43) Normalization is the process of removing all functional dependencies from a relation.

Answer: FALSE

Diff: 2 Page Ref: 88

AACSB: Information Technology

Chapter Obj: Learn to apply a process for normalizing relations

Classification: Concept

44) To create a well-formed relation through normalization, every determinant must be a candidate key.

Answer: TRUE

Diff: 1 Page Ref: 89

AACSB: Information Technology

Chapter Obj: Learn to apply a process for normalizing relations

Classification: Concept

45) Any table that meets the definition of a relation is said to be in second normal form.

Answer: FALSE

Diff: 2 Page Ref: 99

AACSB: Information Technology

Chapter Obj: Learn to apply a process for normalizing relations

Classification: Concept

46) The first step of the normalization process is to identify all the candidate keys of a relation.

Answer: TRUE

Diff: 1 Page Ref: 91

AACSB: Information Technology

Chapter Obj: Learn to apply a process for normalizing relations

Classification: Concept

47) In the normalization process, it is not necessary to identify all the functional dependencies in a relation.

Answer: FALSE

Diff: 1 Page Ref: 90

AACSB: Information Technology

Chapter Obj: Learn to apply a process for normalizing relations

Classification: Concept

48) In the normalization process, it is necessary to identify all the determinants in a relation.

Answer: TRUE

Diff: 2 Page Ref: 90

AACSB: Information Technology

Chapter Obj: Learn to apply a process for normalizing relations

Classification: Concept

49) In the normalization process, if you find a candidate key that is not a primary key, then you have determined that the relation needs to be broken into two or more other relations.

Answer: FALSE

Diff: 2 Page Ref: 90

AACSB: Information Technology

Chapter Obj: Learn to apply a process for normalizing relations

Classification: Concept

50) In the normalization process, if you find that every determinant in a relation is a candidate key, then you have determined that the relation is well formed.

Answer: TRUE

Diff: 2 Page Ref: 90

AACSB: Information Technology

Chapter Obj: Learn to apply a process for normalizing relations

Classification: Concept

51) Since Microsoft Access is a personal database, it is not subject to the modification problems that occur in other relational databases.

Answer: FALSE

Diff: 2 Page Ref: 107-108

AACSB: Information Technology

Chapter Obj: Learn to apply a process for normalizing relations

Classification: Concept

52) In Microsoft Access, relationships between tables are created in the Relationships window.

Answer: TRUE

Diff: 1 Page Ref: 110-112

AACSB: Information Technology

Chapter Obj: Learn to apply a process for normalizing relations

Classification: Concept

53) In Microsoft Access, foreign keys are designated by using the Foreign Key button in the toolbar.

Answer: FALSE

Diff: 2 Page Ref: 112

AACSB: Information Technology

Chapter Obj: Learn to apply a process for normalizing relations

Classification: Concept

54) In Microsoft Access, a relationship is created by dragging a foreign key column and dropping it on top of the corresponding primary key.

Answer: FALSE

Diff: 2 Page Ref: 112

AACSB: Information Technology

Chapter Obj: Learn to apply a process for normalizing relations

Classification: Concept

55) One important relational design principle is that _____.

A) every determinant must be a candidate key

B) every candidate key must not be a determinant

C) every primary key must be a surrogate key

D) every determinant must be functionally dependent on the primary key

E) every primary key must be functionally dependent on every determinant

Answer: A

Diff: 2 Page Ref: 89

AACSB: Information Technology

Chapter Obj: Learn to apply a process for normalizing relations

Classification: Concept

56) During the normalization process, the remedy for a relation that is not well formed is to _____.

A) create a surrogate key

B) create a functional dependency

C) break it into two or more relations that are well formed

D) combine it with another relation that is well formed

E) convert it into a list

Answer: C

Diff: 1 Page Ref: 89-90

AACSB: Information Technology

Chapter Obj: Learn to apply a process for normalizing relations

Classification: Concept

57) A table that meets the requirements of a relation is said to be in which normal form?

- A) Relational normal form (RNF)
- B) First normal form
- C) Second normal form
- D) Boyce-Codd normal form
- E) Domain/key normal form

Answer: B

Diff: 1 Page Ref: 89

AACSB: Information Technology

Chapter Obj: Learn to apply a process for normalizing relations

Classification: Concept

58) The first step of the normalization process is to _____.

- A) identify all the candidate keys of a relation
- B) identify all the foreign keys of a relation
- C) identify all the functional dependencies of a relation
- D) identify all the determinants of a relation
- E) split the relation into two or more new relations

Answer: A

Diff: 1 Page Ref: 89-90

AACSB: Information Technology

Chapter Obj: Learn to apply a process for normalizing relations

Classification: Concept

59) In the normalization process, it is not necessary to _____.

- A) identify all the candidate keys of a relation
- B) identify all the foreign keys of a relation
- C) identify all the functional dependencies of a relation
- D) identify all the determinants of a relation
- E) determine if every determinant is a candidate key

Answer: B

Diff: 2 Page Ref: 89-90

AACSB: Information Technology

Chapter Obj: Learn to apply a process for normalizing relations

Classification: Concept

60) In the normalization process, if you find a candidate key that is not a primary key then you should _____.

- A) place the columns of the functional dependency in a new relation
- B) make the determinant of the functional dependency the primary key of the new relation
- C) leave a copy of the determinant as a foreign key in the original relation
- D) remove the determinant from the original relation
- E) None of the above

Answer: E

Diff: 3 Page Ref: 90

AACSB: Information Technology

Chapter Obj: Learn to apply a process for normalizing relations

Classification: Concept

61) In the normalization process, if you find a candidate key that is not a determinant then you should not _____.

- A) place the columns of the functional dependency in a new relation
- B) make the determinant of the functional dependency the primary key of the new relation
- C) leave a copy of the determinant as a foreign key in the original relation
- D) rename the determinant to another attribute description
- E) create a referential integrity constraint between the original relation and the new relation

Answer: D

Diff: 2 Page Ref: 90

AACSB: Information Technology

Chapter Obj: Learn to apply a process for normalizing relations

Classification: Concept

62) In the normalization process, if you find that every determinant in a relation is a candidate key then you have determined that _____.

- A) the relation is well formed
- B) the relation needs to be broken into two or more new relations
- C) surrogate keys in the relation may not be correctly linked to other relations
- D) the relation needs to have foreign keys added in order to be correctly linked to other relations
- E) referential integrity constraints concerning the relation need to be established

Answer: A

Diff: 2 Page Ref: 90

AACSB: Information Technology

Chapter Obj: Learn to apply a process for normalizing relations

Classification: Concept

63) To be a well-formed relation, every _____ in the relation must be a candidate key.

Answer: determinant

Diff: 2 Page Ref: 89

AACSB: Information Technology

Chapter Obj: Learn to apply a process for normalizing relations

Classification: Concept

64) Any table that meets the requirements of a(n) _____ is in first normal form.

Answer: relation

Diff: 2 Page Ref: 99

AACSB: Information Technology

Chapter Obj: Learn to apply a process for normalizing relations

Classification: Concept

65) What is normalization?

Answer: Normalization is a process whereby relations that are not well-formed are modified to become well-formed relations. A relation is considered to be well-formed if the data within it are not subject to unintended negative consequences when it is maintained. Although normalization recognizes several different normal forms, which are categories that the structure of a relation can be classified into based on the types of problems to which it is vulnerable, the basic premises of normalization are that (1) every determinant should be a candidate key, and (2) any relation that is not well formed should be broken into two or more relations that are well-formed.

Diff: 2 Page Ref: 88-89

AACSB: Information Technology

Chapter Obj: Learn to apply a process for normalizing relations

Classification: Concept

66) What are the basic steps of the normalization process?

Answer: Before starting the normalization process, the relation must be in first normal form, which means that it meets the basic requirements of being a relation. The first step of the normalization process is to identify all the candidate keys in the relation. The second step is to identify all the functional dependencies in the relation. Third, check to see if all the identified determinants are candidate keys. If all determinants are candidate keys, the relation is well-formed and nothing more needs to be done. On the other hand, if any of the determinants is not a candidate key, the relation is not well-formed, and it is necessary to: (1) place the columns of that functional dependency into a new relation, (2) make the determinant of that functional dependency the primary key of the new relation, (3) leave a copy of the determinant in the original relation as a foreign key, and (4) create a referential integrity constraint between the original relation and the new relation. This process should be repeated for every relation until every determinant in a relation is a candidate key of that relation.

Diff: 1 Page Ref: 89-90

AACSB: Information Technology

Chapter Obj: Learn to apply a process for normalizing relations

Classification: Concept

67) What is a multivalued dependency, and how do they affect the normalization process?

Answer: A multivalued dependency is the case where a determinant is associated with a set of values. When isolated, they do not have modification anomalies; tables with these isolated dependencies are considered to be in fourth normal form (4NF).

Diff: 2 Page Ref: 98

AACSB: Information Technology

Chapter Obj: Learn to apply a process for normalizing relations

Classification: Concept

68) To represent a relationship in the relational model, the primary key of one relation is placed into a second relation.

Answer: TRUE

Diff: 2 Page Ref: 80

AACSB: Information Technology

Chapter Obj: Understand how foreign keys represent relationships

Classification: Concept

69) When used to represent a relationship, the primary key must have the same name as the corresponding foreign key.

Answer: FALSE

Diff: 3 Page Ref: 80

AACSB: Information Technology

Chapter Obj: Understand how foreign keys represent relationships

Classification: Concept

70) When the primary key of one relation is placed into a second relation, it is called a

- _____.
- A) field key
 - B) referential integrity
 - C) foreign key
 - D) candidate key
 - E) relocated key

Answer: C

Diff: 1 Page Ref: 80

AACSB: Information Technology

Chapter Obj: Understand how foreign keys represent relationships

Classification: Concept

71) Given the relations:

STUDENT (SID, StudentName, Major, AdvisorID)

ADVISOR (AdvisorID, AdvisorName, Office, Phone)

such that each student is assigned to one advisor, which of the following is true?

- A) SID is both a primary key and a foreign key.
- B) AdvisorName is a determinant.
- C) AdvisorID is a foreign key.
- D) Phone is a candidate key.
- E) Major is a candidate key.

Answer: C

Diff: 3 Page Ref: 80

AACSB: Information Technology

Chapter Obj: Understand how foreign keys represent relationships

Classification: Concept

72) A rule that requires that the values in a foreign key must have a matching value in the primary key to which the foreign key corresponds is called _____.

- A) normalization
- B) a referential integrity constraint
- C) a key matching constraint
- D) a functional dependency
- E) synchronization

Answer: B

Diff: 3 Page Ref: 80

AACSB: Information Technology

Chapter Obj: Understand how foreign keys represent relationships

Classification: Concept

73) In Microsoft Access, relationships between tables are created _____.

- A) by the Relationships button on the Create command tab
- B) by the Relationships button on the Home command tab
- C) in the Relationships window
- D) in the Table window of the table containing the primary key
- E) in the Table window of the table containing the foreign key

Answer: C

Diff: 1 Page Ref: 110-113

AACSB: Information Technology

Chapter Obj: Understand how foreign keys represent relationships

Classification: Concept

74) In Microsoft Access, a relationship between two tables is created _____.

- A) by entering the name of the foreign key in the appropriate table in Design View
- B) by entering the name of the primary key in the appropriate table in Design View
- C) by dragging the primary key column of one table onto the foreign key column of the other table in the Relationships window
- D) by dragging the foreign key column of one table onto the primary key column of the other table in the Relationships window
- E) by dragging the primary key column of one table onto the primary key column of the other table in the Relationships window

Answer: C

Diff: 2 Page Ref: 110-113

AACSB: Information Technology

Chapter Obj: Understand how foreign keys represent relationships

Classification: Concept

75) In Microsoft Access, referential integrity constraints are created _____.
A) by setting a property value on the primary key in the table which contains it
B) by setting a property value on the foreign key in the table which contains it
C) by setting a property value on the primary key in the Relationships window
D) by setting a property value on the foreign key in the Relationships window
E) by checking the Enforce Referential Integrity check box in the Edit Relationships dialog box

Answer: E

Diff: 2 Page Ref: 113

AACSB: Information Technology

Chapter Obj: Understand how foreign keys represent relationships

Classification: Concept

76) In Microsoft Access, the relationship between two tables is not actually created until _____.

- A) the **OK** button in the Create Relationships dialog box is clicked
- B) the **Create** button in the Create Relationships dialog box is clicked
- C) the **OK** button in the Edit Relationships dialog box is clicked
- D) the **Create** button in the Edit Relationships dialog box is clicked
- E) the **Join** button in the Edit Relationships dialog box is clicked

Answer: D

Diff: 2 Page Ref: 113

AACSB: Information Technology

Chapter Obj: Understand how foreign keys represent relationships

Classification: Concept

77) When the primary key of one relation is placed in a second relation to represent a relationship, the attribute in the second relation is called a(n) _____ key.

Answer: foreign

Diff: 2 Page Ref: 80

AACSB: Information Technology

Chapter Obj: Understand how foreign keys represent relationships

Classification: Concept

78) A rule that requires every value in a foreign key to match values in the corresponding primary key is called a(n) _____ constraint.

Answer: referential integrity

Diff: 3 Page Ref: 80

AACSB: Information Technology

Chapter Obj: Understand how foreign keys represent relationships

Classification: Concept

79) In Microsoft Access, relationships between tables are built in the _____.

Answer: Relationships window

Diff: 2 Page Ref: 110-113

AACSB: Information Technology

Chapter Obj: Understand how foreign keys represent relationships

Classification: Concept

80) In Microsoft Access, the Relationships window is accessed by using the _____ button on the Database tools command tab.

Answer: Relationship

Diff: 2 Page Ref: 110-113

AACSB: Information Technology

Chapter Obj: Understand how foreign keys represent relationships

Classification: Concept

81) To create a relationship in Microsoft Access, we drag and drop the _____ of a table.

Answer: primary key

Diff: 2 Page Ref: 112

AACSB: Information Technology

Chapter Obj: Understand how foreign keys represent relationships

Classification: Concept

82) In Microsoft Access, referential integrity constraints are created in the _____.

Answer: Edit Relationships dialog box

Diff: 3 Page Ref: 112

AACSB: Information Technology

Chapter Obj: Understand how foreign keys represent relationships

Classification: Concept

83) Explain the concept of a foreign key.

Answer: To implement a relationship within a relational database, the primary key of one relation is placed as an attribute in another relation. This attribute is called a foreign key in the second relation because it is the primary key of a relation that is foreign to the table in which the field resides.

Diff: 2 Page Ref: 80

AACSB: Information Technology

Chapter Obj: Understand how foreign keys represent relationships

Classification: Concept

84) Explain how to create a relationship in Microsoft Access.

Answer: In Microsoft Access, relationships are created in the **Relationships** window, which is opened by using the **Relationships** button on the Database Tools command tab. Once the **Relationships** window is open, the needed database tables are displayed using the **Show Table** dialog box. A relationship is initiated by dragging the primary key of one table and dropping it on top of the corresponding foreign key in the related table. At this point the **Edit Relationships** dialog box is displayed. A referential integrity constraint can be set in this box by checking the **Enforce Referential Integrity** check box. The relationship is actually created by clicking the **Create** button in the **Edit Relationships** dialog box.

Diff: 2 Page Ref: 110-113

AACSB: Information Technology

Chapter Obj: Understand how foreign keys represent relationships

Classification: Concept

85) Every table is a relation, but not every relation is a table.

Answer: FALSE

Diff: 3 Page Ref: 70-72

AACSB: Information Technology

Chapter Obj: Understand how relations differ from nonrelational tables

Classification: Concept

86) Every relation is a table, but not every table is a relation.

Answer: TRUE

Diff: 2 Page Ref: 70-72

AACSB: Information Technology

Chapter Obj: Understand how relations differ from nonrelational tables

Classification: Concept

87) Which of the following is not true about a relation?

A) A relation is a two-dimensional table.

B) The cells of a relation must hold a single value.

C) A relation may have duplicate column names.

D) A relation may not have duplicate rows.

E) The order of the rows of a relation is insignificant.

Answer: C

Diff: 1 Page Ref: 71

AACSB: Information Technology

Chapter Obj: Understand how relations differ from nonrelational tables

Classification: Concept

88) Which of the following is true about a relation?

A) The order of the columns in a relation must go from largest to smallest.

B) All entries in any column must be of the same kind.

C) A relation may have duplicate column names.

D) A relation may have duplicate rows.

E) A relation may have multiple names.

Answer: B

Diff: 2 Page Ref: 71

AACSB: Information Technology

Chapter Obj: Understand how relations differ from nonrelational tables

Classification: Concept

89) What requirements must a two-dimensional table satisfy in order to be a relation?

Answer: For a table to be considered a relation, it must meet several requirements. First, every cell must contain a single value. Second, there can be no duplicate rows. Third, each column must have a unique name. Fourth, the order of the columns must have no significance. Fifth, all values for a given column must be of the same type. Finally, the order of the rows must have no significance.

Diff: 1 Page Ref: 71

AACSB: Information Technology

Chapter Obj: Understand how relations differ from nonrelational tables

Classification: Concept

90) In practice, why would tables that have duplicate rows be allowed?

Answer: It is not uncommon for a table that is returned as the result of a data manipulation operation, such as a query, to contain duplicate rows. This is often tolerated because of the processing time necessary for the DBMS to search the table to find and eliminate duplicate rows. This is especially true if the table is very large. In these cases, it is often acceptable to allow the duplicate rows to exist.

Diff: 3 Page Ref: 74

AACSB: Information Technology

Chapter Obj: Understand how relations differ from nonrelational tables

Classification: Concept

Database Concepts, 8e (Kroenke)

Appendix B Getting Started with Oracle Database XE

1) Oracle Database XE uses Application Express to create new workspaces.

Answer: TRUE

Diff: 1 Page Ref: B-16

AACSB: Information Technology

Chapter Obj: Learn how to create a database in Oracle Database XE 11g Release 2

Classification: Concept

2) To log into a workspace connection in Oracle SQL Developer, use the username and password you created for Application Express.

Answer: TRUE

Diff: 1 Page Ref: B-16

AACSB: Information Technology

Chapter Obj: Learn how to create a database in Oracle Database XE 11g Release 2

Classification: Concept

3) Which of the following is the easiest tool for creating a database with Oracle Database?

- A) The Oracle Database 11g XE utility
- B) The Oracle SQL*Plus command utility program
- C) The Oracle SQL Developer
- D) Both A and C
- E) A, B and C

Answer: A

Diff: 2 Page Ref: B-16

AACSB: Information Technology

Chapter Obj: Learn how to create a database in Oracle Database XE 11g Release 2

Classification: Concept

4) Which of the following is the easiest tool for doing database development with Oracle Database?

- A) The Oracle Database 11g XE utility
- B) The Oracle SQL*Plus command utility program
- C) The Oracle SQL Developer
- D) Both A and C
- E) A, B and C

Answer: C

Diff: 2 Page Ref: B-19

AACSB: Information Technology

Chapter Obj: Learn how to create a database in Oracle Database XE 11g Release 2

Classification: Concept

5) Which of the following is an account name for which you are asked to enter a password for the Oracle Database XE 11.2 utility?

- A) SYSTEM
- B) EXTERNAL
- C) INTERNAL
- D) Both A and B
- E) A, B and C

Answer: A

Diff: 2 Page Ref: B-10

AACSB: Information Technology

Chapter Obj: Learn how to create a database in Oracle Database XE 11g Release 2

Classification: Concept

6) Which of the following is an account name for which you would enter a password to connect to a workspace in Oracle SQL Developer?

- A) Database Username
- B) Application Express Username
- C) INTERNAL
- D) Both A and B
- E) A, B and C

Answer: D

Diff: 2 Page Ref: B-16

AACSB: Information Technology

Chapter Obj: Learn how to create a database in Oracle Database XE 11g Release 2

Classification: Concept

7) Users log into the Oracle Database XE utility using the _____ account.

Answer: SYSTEM; SYS

Diff: 2 Page Ref: B-10

AACSB: Information Technology

Chapter Obj: Learn how to create a database in Oracle Database XE 11g Release 2

Classification: Concept

8) Users in SQL Developer log into a workspace using the _____ account.

Answer: associated workspace user

Diff: 2 Page Ref: B-19, B-20

AACSB: Information Technology

Chapter Obj: Learn how to create a database in Oracle Database XE 11g Release 2

Classification: Concept

9) What is imported from Excel in order to populate an Oracle Database XE Table?

- A) Key
- B) Workbook
- C) Macro
- D) Worksheet
- E) All of the above

Answer: D

Diff: 2 Page Ref: B-34

AACSB: Information Technology

Chapter Obj: Learn how to import Microsoft Excel worksheet data into a database

Classification: Concept

10) Explain how you would import Microsoft Excel data via SQL Developer by creating the table while importing the data.

Answer: After choosing the **Import Data** command, you open the **Import Data File** dialog box and choose the Excel workbook file. Select the worksheet of the workbook. Then select the table name for the imported data, after which you select the column names. You may then select column characteristics, such as primary key, integer, and not null. Finally, you are asked to review all of your choices; if they are sufficient, click **OK** to complete the import process.

Diff: 2 Page Ref: B-39

AACSB: Information Technology

Chapter Obj: Learn how to import Microsoft Excel worksheet data into a database

Classification: Concept

11) There are four editions of Oracle Database 12c.

Answer: TRUE

Diff: 1 Page Ref: B-4

AACSB: Information Technology

Chapter Obj: Learn how to install Oracle Database XE 11g Release 2

Classification: Concept

12) Oracle Database XE has no set maximum database size.

Answer: FALSE

Diff: 1 Page Ref: B-5

AACSB: Information Technology

Chapter Obj: Learn how to install Oracle Database XE 11g Release 2

Classification: Concept

13) Another name for Oracle Database Express Edition 11g Release 2 is Oracle Database XE.

Answer: TRUE

Diff: 1 Page Ref: B-5

AACSB: Information Technology

Chapter Obj: Learn how to install Oracle Database XE 11g Release 2

Classification: Concept

14) To log into Oracle Database XE, use your personal account information.

Answer: FALSE

Diff: 1 Page Ref: B-7

AACSB: Information Technology

Chapter Obj: Learn how to install Oracle Database XE 11g Release 2

Classification: Concept

15) You do not need administrative privileges on your Windows computer at any point of the Oracle Database XE installation.

Answer: FALSE

Diff: 1 Page Ref: B-7

AACSB: Information Technology

Chapter Obj: Learn how to install Oracle Database XE 11g Release 2

Classification: Concept

16) Oracle 12c is a/an _____ class DBMS.

Answer: enterprise

Diff: 1 Page Ref: B-4

AACSB: Information Technology

Chapter Obj: Learn how to install Oracle Database XE 11g Release 2

Classification: Concept

17) What is the Oracle Database 11g XE utility?

Answer: The Oracle Database 11g XE utility is a Web-based administration utility that is the preferred tool for database instance management. It is not intended for application development, only database administration. It is used to create workspaces (databases), user accounts and other administrative tasks.

Diff: 2 Page Ref: B-16

AACSB: Information Technology

Chapter Obj: Learn how to install Oracle Database XE 11g Release 2

Classification: Concept

18) The Oracle Database GUI tool used for application development is the Oracle SQL Developer.

Answer: TRUE

Diff: 1 Page Ref: B-14

AACSB: Information Technology

Chapter Obj: Learn how to install Oracle SQL Developer

Classification: Concept

19) Oracle SQL Developer is a command-line interface for the creation of database objects.

Answer: FALSE

Diff: 1 Page Ref: B-14

AACSB: Information Technology

Chapter Obj: Learn how to install Oracle SQL Developer

Classification: Concept

20) What is SQL Developer?

Answer: SQL Developer is the GUI tool that is intended to be used instead of SQL*Plus. It is generally used for application development, and it provides a comprehensive development environment for Oracle Database users and developers.

Diff: 2 Page Ref: B-21

AACSB: Information Technology

Chapter Obj: Learn how to install Oracle SQL Developer

Classification: Concept

21) The Oracle Database ODBC Client is automatically installed when Oracle Database XE is installed.

Answer: TRUE

Diff: 2 Page Ref: B-45

AACSB: Information Technology

Chapter Obj: Learn how to install the Oracle ODBC Client software

Classification: Concept

22) When Oracle Database XE is installed, the Oracle Database ODBC client is _____.

A) installed automatically as part of the installation

B) installed manually as a separate part of the installation process

C) not installed and must be downloaded and installed manually

D) not installed because there is no ODBC client for Oracle Database 11g Release 2 Express Edition

E) Either A or B

Answer: A

Diff: 2 Page Ref: B-45

AACSB: Information Technology

Chapter Obj: Learn how to install the Oracle ODBC Client software

Classification: Concept

23) The Oracle Database ODBC Client is installed _____ when Oracle Database Express Edition 11g Release 2 is installed.

Answer: automatically

Diff: 2 Page Ref: B-45

AACSB: Information Technology

Chapter Obj: Learn how to install the Oracle ODBC Client software

Classification: Concept

24) The default file extension for text files created for or within SQL Developer is .sql.

Answer: TRUE

Diff: 2 Page Ref: B-21

AACSB: Information Technology

Chapter Obj: Learn how to submit SQL commands to create table structures

Classification: Concept

25) When using Oracle Database, a *sequence* is an object that generates a sequential series of unique numbers.

Answer: TRUE

Diff: 1 Page Ref: B-23

AACSB: Information Technology

Chapter Obj: Learn how to submit SQL commands to create table structures

Classification: Concept

26) You may use simple text editors to create SQL scripts for Oracle Database XE.

Answer: TRUE

Diff: 1 Page Ref: B-21

AACSB: Information Technology

Chapter Obj: Learn how to submit SQL commands to create table structures

Classification: Concept

27) All Excel worksheets imported into Oracle Database will have an appropriate column for a primary key.

Answer: FALSE

Diff: 2 Page Ref: B-34

AACSB: Information Technology

Chapter Obj: Learn how to submit SQL commands to create table structures

Classification: Concept

28) Which of the following tasks can be done using the Oracle SQL Developer?

A) See the structure of a table

B) Add and remove columns from a table

C) Insert and delete data from a table

D) Both A and B

E) A, B and C

Answer: E

Diff: 3 Page Ref: B-21, B-27, B-41

AACSB: Information Technology

Chapter Obj: Learn how to submit SQL commands to create table structures

Classification: Concept

29) In SQL Developer, DBMS objects are displayed _____.

A) in the Navigation Pane

B) in the Object Browser

C) in the Connections area

D) in the tabbed document window

E) in the command tab

Answer: C

Diff: 2 Page Ref: B-21

AACSB: Information Technology

Chapter Obj: Learn how to submit SQL commands to create table structures

Classification: Concept

30) Database objects are displayed in the _____ navigator window in the SQL Developer.

Answer: Connections

Diff: 3 Page Ref: Fig B-21

AACSB: Information Technology

Chapter Obj: Learn how to submit SQL commands to create table structures

Classification: Concept

31) Explain sequences and their relationship to surrogate keys.

Answer: A sequence is an Oracle Database object that generates a sequential series of unique numbers. It allows the developer to specify the sequence's starting value and increment.

Sequences are useful for specifying surrogate keys. The sequence methods CurrVal and NextVal may be used to access the row with the current sequence number and the next sequence number respectively. Using sequences, however, does not guarantee valid surrogate key values. For example, there is nothing that forces the surrogate key field to use the numbers generated by the sequence; therefore, a record may be inserted that does not follow the sequence. This means code must be written to control surrogate key values when sequences are used. Nonetheless, sequences are the best way to work with surrogate keys in Oracle Database.

Diff: 2 Page Ref: B-23

AACSB: Information Technology

Chapter Obj: Learn how to submit SQL commands to create table structures

Classification: Concept

32) Sequences are most often used to provide values for surrogate keys.

Answer: TRUE

Diff: 2 Page Ref: B-27

AACSB: Information Technology

Chapter Obj: Learn how to submit SQL commands to insert database data

Classification: Concept

33) The NextVal method provides the next value in a sequence.

Answer: TRUE

Diff: 1 Page Ref: B-27

AACSB: Information Technology

Chapter Obj: Learn how to submit SQL commands to insert database data

Classification: Concept

34) The CurrVal method provides the current value in a sequence.

Answer: TRUE

Diff: 2 Page Ref: B-27

AACSB: Information Technology

Chapter Obj: Learn how to submit SQL commands to insert database data

Classification: Concept

35) With Oracle Database, using a *sequence* does not guarantee valid surrogate key values.

Answer: TRUE

Diff: 3 Page Ref: B-28

AACSB: Information Technology

Chapter Obj: Learn how to submit SQL commands to insert database data

Classification: Concept

36) With Oracle Database, data must be entered using SQL INSERT statements.

Answer: FALSE

Diff: 2 Page Ref: B-27

AACSB: Information Technology

Chapter Obj: Learn how to submit SQL commands to insert database data

Classification: Concept

37) The Oracle Database FORMAT_DATE function can be used to make sure that Oracle Database interprets date data correctly.

Answer: FALSE

Diff: 2 Page Ref: B-28

AACSB: Information Technology

Chapter Obj: Learn how to submit SQL commands to insert database data

Classification: Concept

38) SQL statements can be run individually or as part of a related group of SQL statements known as a _____.

A) result

B) resultset

C) script

D) scriptset

E) commandset

Answer: C

Diff: 1 Page Ref: B-21

AACSB: Information Technology

Chapter Obj: Learn how to submit SQL commands to insert database data

Classification: Concept

39) Which method returns the next value in a sequence?

A) CountVal

B) Next

C) UpVal

D) NextVal

E) Append

Answer: D

Diff: 1 Page Ref: B-27

AACSB: Information Technology

Chapter Obj: Learn how to submit SQL commands to insert database data

Classification: Concept

40) If T3 is a table with three columns C1, C2 and C3, where C1 is integer data, C2 is character data, and C3 is date data, which of the following would be the proper statement to have Oracle Database enter the date 02/10/14 into a row in table T3 while making sure that it is formatted correctly as shown?

- A) SET INTO T3 VALUES (101, 'Smith', '02/10/14');
- B) SET INTO T3 VALUES (101, 'Smith', TO_DATE ('02/10/14', 'DD/MM/YY'));
- C) INSERT INTO T3 VALUES (101, 'Smith', '02/10/2014');
- D) INSERT INTO T3 VALUES (101, 'Smith', TO_DATE ('02/10/14', 'DD/MM/YY'));
- E) INSERT INTO T3 VALUES ('Smith', TO_DATE ('02/10/14', 'DD/MM/YY'), 101);

Answer: D

Diff: 3 Page Ref: B-28

AACSB: Information Technology

Chapter Obj: Learn how to submit SQL commands to insert database data

Classification: Concept

41) To run an SQL script, click the _____ button.

Answer: Run Script

Diff: 2 Page Ref: Fig B-23

AACSB: Information Technology

Chapter Obj: Learn how to submit SQL commands to insert database data

Classification: Concept

42) Oracle Database Express Edition 11g Release 2 uses _____ to generate surrogate keys.

Answer: sequences

Diff: 1 Page Ref: B-23

AACSB: Information Technology

Chapter Obj: Learn how to submit SQL commands to insert database data

Classification: Concept

43) To run an SQL script in Oracle Database XE _____.

- A) click the Execute button
- B) click the Execute Script button
- C) click the Run Script button
- D) click the Ready button
- E) click the Results button

Answer: C

Diff: 2 Page Ref: B-23

AACSB: Information Technology

Chapter Obj: Learn how to submit SQL commands to query a database

Classification: Concept

44) SQL query results are displayed _____.

- A) in a tabbed Resultset window
- B) in a tabbed Query Result window
- C) in a tabbed Document window
- D) in a tabbed Messages window
- E) in a tabbed Finished window

Answer: B

Diff: 2 Page Ref: B-33

AACSB: Information Technology

Chapter Obj: Learn how to submit SQL commands to query a database

Classification: Concept

45) To run an SQL query, click the _____ button.

Answer: Run Statement

Diff: 2 Page Ref: B-32-33

AACSB: Information Technology

Chapter Obj: Learn how to submit SQL commands to query a database

Classification: Concept

46) To create a new SQL query, click the _____ button.

Answer: Open SQL Worksheet

Diff: 1 Page Ref: Fig B-32

AACSB: Information Technology

Chapter Obj: Learn how to submit SQL commands to query a database

Classification: Concept

47) SQL query results are displayed in a tabbed _____ window.

Answer: Results

Diff: 1 Page Ref: B-33

AACSB: Information Technology

Chapter Obj: Learn how to submit SQL commands to query a database

Classification: Concept

48) What is an SQL script, and why are SQL scripts useful?

Answer: An SQL Script is a group of SQL statements that are run consecutively. Each of the SQL statements in the script could be run separately, but running them as a group is more efficient, and this is what makes SQL scripts useful. A good example is grouping all the SQL CREATE TABLE statements necessary to build a database structure into a single SQL script.

Diff: 2 Page Ref: B-21

AACSB: Information Technology

Chapter Obj: Learn how to submit SQL commands to query a database

Classification: Concept

49) Describe how to create and run an SQL script in Oracle Database Express Edition 11g Release 2.

Answer: SQL scripts are created in a text editor and saved with an *.sql file extension. While a text editor, such as Microsoft Notepad, can be used, the most efficient editor for Oracle Database Express Edition 11g Release 2 is the text editor built into the Oracle SQL Developer. In Oracle SQL Developer, the SQL script text is edited and then saved as an *.sql file. It is then run using the Run Script button.

Diff: 2 Page Ref: B-21

AACSB: Information Technology

Chapter Obj: Learn how to submit SQL commands to query a database

Classification: Concept

50) Describe how to create and run an SQL query in Oracle Database XE 11g Release 2.

Answer: In Oracle Database XE 11g Release 2, SQL queries are created and run in the Oracle SQL Developer. Click the Open SQL Worksheet button to open a new tabbed query window. Type the SQL query into the tabbed document. Click the Run Statement button to run the query. Results are displayed in the tabbed Query Results window.

Diff: 2 Page Ref: B-32-33

AACSB: Information Technology

Chapter Obj: Learn how to submit SQL commands to query a database

Classification: Concept

51) What kind of connection is needed to use Microsoft Access 2016 as an application development frontend for an Oracle Database XE database?

- A) XML
- B) WP
- C) XACCDB
- D) JSON
- E) ODBC

Answer: E

Diff: 1 Page Ref: B-45

AACSB: Information Technology

Chapter Obj: Learn how to use Microsoft Access as a front end to an Oracle Database XE database

Classification: Concept

52) It is useful to have Microsoft Access 2016 to act as the application _____ for an Oracle Database XE database.

Answer: frontend

Diff: 2 Page Ref: B-45

AACSB: Information Technology

Chapter Obj: Learn how to use Microsoft Access as a front end to an Oracle Database XE database

Classification: Concept