Chapter 2: *Database Concepts and Applications in Human Resource Information Systems*

Multiple Choice

1. One of the benefits of a relational database systems is that:
   A. end users who generally had limited programming experience can still utilize the query functionality.
   B. organizations can easily implement them.
   C. they are easy to maintain.
   D. they are a strategic HRM resource

ANS: A

2. The employee's name is an example of:
   A. an entity
   B. an attribute
   C. an object
   D. a primary key

ANS: B

3. Which of the following is NOT a shortcoming of early file-oriented database structures?
   A. data redundancy
   B. poor data control
   C. inadequate data manipulation capabilities
   D. inability to resemble manual record keeping

ANS: D

4. When a(n) _____ from one table is stored as an attribute of another table, that attribute is called a _____.
   A. primary key, foreign key
   B. object, entity
   C. foreign key, primary key
   D. entity, attribution

ANS: A

5. HR metrics are:
   A. various measures of organizational performance
   B. derived from organizational data
   C. improve organizational efficiency and effectiveness
   D. All of the above

ANS: D

6. _____ is a broad category of business applications and technologies for creating data warehouses and for analyzing and providing access to these specialized data to help enterprise users make better business decisions.
   A. Strategic planning
   B. Business intelligence
   C. Enterprise solution
   D. Data intelligence

ANS: B

7. Queries are important because:
   A. they are a way to store data
   B. they provide direction for strategic HR
   C. they provide answers to questions about the data stored in a database
   D. allow you to manipulate information

ANS: C

8. The database design process:
   A. begins with determining what the users want
   B. is a task that only upper management should manage
   C. begins with a budget estimate
   D. requires outside consultant services

ANS: A

9. Information is the _____ of data while knowledge is information that has been given _____.
   A. accumulation, structure
   B. meaning, structure
   C. interpretation, meaning
   D. understanding, definitions

ANS: C

10. Functional units, management levels, and geographically dispersed locations may all have the need to:
    A. share data
    B. limit attributes in the database
    C. reduce database needs
    D. limit query functionality
ANS: A

11. The advent of the Internet and a standardized communication protocol have contributed to:
    A. easier database programming
    B. data sharing across geographically dispersed locations
    C. the maximization of query functionality
    D. the elimination of a centralized database
ANS: B

12. MS Access would be appropriate for an organization that:
    A. had a small database and limited knowledge of database programming
    B. had a small database and extensive knowledge of database programming
    C. had a large database and limited knowledge of database programming
    D. had a large database and extensive knowledge of database programming
ANS: A

13. Data processing systems that performed record-keeping functions that mimicked existing manual procedures were called:
    A. file-oriented data structures
    B. small database structures
    C. data warehouses
    D. electronic data storage
ANS: A

14. Patterns in large data sets are identified through:
    A. the creation of tables
    B. data gathering
    C. data mining
    D. electronic data storage
ANS: C

15. Business intelligence (BI) applications include:
    A. the activities of decision support systems
    B. query and reporting
    C. forecasting
    D. all of the above
ANS: D

16. A _____ allows you to ask a question based on one or more tables in a database.
    A. action query
    B. question query
    C. cross-tab query
    D. select query
ANS: D

17. A shortcoming of hierarchical and network database systems was that:
    A. only very knowledgeable technical staff members could interact with the database effectively
    B. relationships between records were explicitly maintained
    C. it replaced file-oriented structures
    D. it was electronically stored data
ANS: A

True or False

1. An attribute is a characteristic of the entity in a relational database.
ANS: T

2. Data mining involves visually analyzing large data sets to identify recurring relationships.
ANS: F

3. A data warehouse is a special type of database that is optimized for reporting and analysis and is the raw material for management's decision support system.
ANS: T

4. A database is a permanent, self-descriptive store of interrelated data items that can be processed by only one business application.
ANS: F

5. Entities include only physical but not conceptual items.
ANS: F

6. A field is an attribute of a entity that is stored in a table.
ANS: T

7. A foreign key represents the primary key from another table that is stored as an attribute in another table.
ANS: T

8. Relational database data is stored in tables where each table represents one ‘entity’ in the real world and the information associated with that ‘entity’ is stored only in that table. Tables are related to each other through a common attribute or key.
ANS: T

9. Tables are used to store information about entities. Multiple tables are created for each entity.
ANS: F

10. Transaction processing systems are business applications that focus on processing operational data.
ANS: T

11. One of the benefits of a relational database systems is that end users who generally had limited programming experience can still utilize the query functionality.
ANS: T

12. The employee's name is an example of an object.
ANS: F

13. MS Access would be appropriate for an organization that had a small database and limited knowledge of database programming.
ANS: T

14. The advent of the Internet and a standardized communication protocol have contributed to easier database programming.
ANS: F

15. The database design process begins with determining what the users want.
ANS: T

Short Answer

1. What are some examples how an organization might use the data sharing ability of a relational database system?

Examples can come from: (1) data sharing between functional units, (2) data sharing between management levels, and (3) data sharing across geographically dispersed locations.

2. Provide some examples of actions that might be performed as a result of an action query.

Actions include updating data in the table (e.g., increasing the base salary of all employees who were rated above average in the latest performance rating), deleting records from the table (e.g., removing employees from the employees table if they no longer work at the company), or inserting records (e.g., the query may add a new set of benefits to the benefits table).

3. What is meant by a cross-tab query?

A cross-tab query performs calculations on the values in a field and displays the results in a datasheet. The reason it is called "cross-tab" is that it tabulates the data for a set of descriptor attributes, contrasting them or crossing them in a table format

4. Compare the typical users of an action query with those of a cross-tab query.

Action queries improve the operational efficiency of managing and maintaining database and are important to the operational staff but of less interest to HR managers and executives. Cross-tab queries provide the information that managers and executives expect.

5. What are the implications for databases and information sharing in today's global environment?

In today's global environment, access to data from any physical location in the world is increasingly important. Computer networks are created that provide instant access to these operational data, allowing real-time managerial decision capability regardless of physical location.

A centralized database allows a company to confine its data to a single location and, therefore, more easily control data integrity, updating, backup, query, and control access to the database. A company with many locations and telecommuters, however, must develop a communications infrastructure to facilitate data sharing over a wide geographical area. The advent of the Internet and a standardized communication protocol made the centralized database structures and geographically dispersed data sharing feasible.

6. What were the benefits of relational database systems versus traditional file-oriented data structures?

Relational database systems eliminated the shortcomings of traditional file-oriented structures including (1) data redundancy—an employee's name and address could be stored in many different files; (2) poor data control—if you had access to the file you had access to all the data in the file, which may not be desirable because you may want to restrict the data viewed by a particular user; (3) inadequate data manipulation capabilities—it was very difficult to combine the data across files and to easily update and to add new data; and (4) excessive programming effort—any change in the data required extensive changes in the programming that accessed the data. Perhaps, the most significant difference between a file-based system and a relational database system is that data are easily shared.

7. What is meant by business intelligence?

Business intelligence is a broad category of business applications and technologies for creating data warehouses and for analyzing and providing access to these specialized data to help enterprise users make better business decisions. BI applications include the activities of decision support systems, query and reporting, statistical analysis, forecasting, and data mining.

8. What are decision support systems and what role do they play?

Decision Support Systems are software applications that use databases, primarily data warehouses to assist senior managers and business professionals in making business decisions.

9. What is meant by a hierarchical database?

Hierarchical database is a database where the relationships among the data are created between sets of data based on where the data are stored in a record.

10. What critical role does N-tier architecture provide to large, multinational companies?

N-tier architectures represent the software and hardware configuration in which databases and applications are distributed among many different computers around the world.