**Database Management Systems**

Sheet-3 Dr. Hatem Abdelkader 2019

**Multiple Choice Questions**

( )1. Software that defines a database, stores the data, supports a query language, produces reports and creates data entry screens is a:

A) data dictionary B) database management system (DBMS) C) decision support system D) relational database

( )2. The modern database report writer:

A) is a career path that focuses on creating, managing and supporting the reports generated from databases B) provide limited control over how information is displayed and reported. C) provides the tools for database designer to display information in the desired format D)provides the tools for the database administrator to monitor and report on database use and activity

( )3. The separation of the data definition from the program is known as:

A) data dictionary B) data independence C) data integrity D) referential integrity

( )4. In the client / server model, the database:

A) is downloaded to the client upon request B) is shared by both the client and server C) resides on the client side D) resides on the server side

( )5. The traditional storage of data that is organized by customer, stored in separate folders in filing cabinets is an example of what type of 'database' system?

A) Hierarchical B) Network C) Object oriented D) Relational

( )6. The database design that consists of multiple tables that are linked together through matching data stored in each table is called a:

A) Hierarchical database B) Network database C) Object oriented database D) Relational database

( )7. What is the main limitation of Hierarchical Databases?

A) Limited capacity (unable to hold much data) B) Limited flexibility in accessing data C) Overhead associated with maintaining indexes D) The performance of the database is poor

( )8. An abstract data type is used to:

A) link data from remote databases B) prevent users from getting to database security information C) provide a conceptual view of the data so it is easier to understand D) store complex data structure to represent the properties of objects

( )9. One of the first phases of a new database project that involves critical areas, expensive hardware or software within the organization is called \_\_\_\_\_\_\_\_\_\_\_.

A) analysis phase B) feasibility study C) investigation stage D) system design

( )10. Which component of the database management system (DBMS) most affects the ability to handle large problems (scalability)?

A) Data Storage Subsystem B) Database Engine C) Query Processor D) Security Subsystem

( )11. The primary difference between the Relational database (RDB) and Object Oriented database (OODB) models is:

A) OODB incorporates methods in with the definition of the data structure, while RDB does not

B) OODB supports multiple objects in the same database while RDB only supports a single table per database

C) RDB allows the definition of the relationships between the different tables, while OODB does not allow the relationships to be defined between objects

D) RDB supports indexes, while OODB does not support indexes

( )12. Which of the following items is not the advantage of a DBMS?

A) Improved ability to enforce standards B) Improved data consistency C) Local control over the data D) Minimal data redundancy

( )13. The predominant way of storing data today is using which type of database models?

A) Hierarchical B) Network C) Object oriented D) Relational

( )14. Two different terms are used to describe the characteristics of interest for an entity. They are attributes and:

A) classes B) entities C) properties D) traits

( )15. When building a database, the data dealing with an entity is modeled as a:

A) attribute B) class C) object D) table

( )16. Database system modelers use this type of diagram to graphically represent both the data structure and how the different objects are interrelated.

A) Class Diagram B) Data Diagram C) Object Diagram D) Table Relationship Diagram

( )17. In relational database model, after conceptually designing your database, the information contained in a single class would be stored in a:

A) database B) field C) property D) table

( )18. The property (or set of properties) that uniquely defines each row in a table is called the:

A) identifier B) index C) primary key D) symmetric key

( )19. Business rules can be represented in the database through:

A) associations (or relationships) B) attributes C) properties D) secondary keys

( )20. The association role defines:

A) how tables are related in the database B) the relationship between the class diagram and the tables in the database C) the tables that each attribute is contained D) which attribute is the table's primary key

( )21. The purpose of an N-Ary association is:

A) to capture a parent-child relationship B) to deal with one to many relationships C) to deal with relationships that involve more than two tables D) to represent an inheritance relationship

( )22. A composition association is drawn using which symbol:

A) A line which loops back onto the same table B) Small closed diamond at the end of a line connecting two tables C) Small open diamond at the end of a line connecting two tables D) Small triangle at the end of a line connecting the aggregated item and multiple component items

( )23. A reflexive association is drawn using which symbol:

A) a line which loops back onto the same table B) small closed diamond at the end of a line connecting two tables C) small open diamond at the end of a line connecting two tables D) small triangle at the end of a line connecting the aggregated item and multiple component items

( )24. Assume you are creating a database to handle the data associated with instruction at a university. What is the most appropriate special association to model that a class may have multiple pre-requisites?

A) aggregation association B) generalization association C) n-ary association D) reflexive association

( )25. Assume you are creating a database to handle the data associated with instruction at a university. What is the most appropriate special association to model degree requirements (i.e., required number of courses in humanity, science, math, etc)?

A) composition association B) generalization association C) n-ary association D) reflexive association

( )26. Assume you are creating a database to handle the data associated with instruction at a university. What is the most appropriate special association to model that a course has an assigned instructor, Teaching Assistants, a classroom, meeting time slot, and class roster?

A) aggregation association B) generalization association C) n-ary association D) reflexive association

( )27. What is the most appropriate special association that indicates that multiple textbooks make up a course required reading list?

A) aggregation association B) generalization association C) n-ary association D) reflexive association

( )28. What is the special association that indicates that one object can be broken down into multiple special cases?

A) composition association B) generalization association C) n-ary association D) reflexive association

( )29. The ability to define common properties or functions in the higher class and then modify them in the lower classes is called:

A) Inheritance B) Polymorphism C) Reflexive D) Transformance

( )30. A reflexive association is one where one class is:

A) broken down into special cases B) combined with multiple other classes C) combined with one other class D) linked back to itself

( )31. Which of the following statements is not correct?

A) A primary goal of a database system is to share data with multiple users

B) It is possible to change a method or property inherited from a higher level class

C) While companies collect data all the time, the structure of the data changes very often.

D) In a client / server environment, data independence causes client side applications to be essentially independent of the database stored on the server side.

( )32. Which of the following statements is not correct?

A) Data Normalization is the process of defining the table structure B) The purpose of class diagrams is to model the interrelationships between the different classes in the database C) Individual objects are stored as rows in a table D) Properties of an object are stored as columns in a table.

( )33. Which of the following statements is not correct?

A) The primary key must be unique for a given table

B) Specifying a zero (0) for the lower bound for the association multiplicity on a class diagram indicates that the item is required

C) Specifying a one (1) for the lower bound for the association multiplicity on a class diagram indicates that the item is required

D) Most databases allow multiple records that are identical (i.e., records that have the same values for all properties).

( )34. Which of the following statements is not correct?

A) All many-to-many relationships must be converted to a set of one-to-many relationships by adding a new entity

B) In a one-to-one relationship between two classes, the two classes are generally described by one table in relational database model

C) Encapsulation provides some security and control features

D) Propertiesand functions can be protected from other areas of the applications