Question 1 (1 point)

Saved
In an SQL query, which SQL keyword is used to implement a subquery?
Question 1 options:

- GROUP BY
- HAVING
- ORDER BY
- SELECT
- SORT BY

Question 2 (1 point)

Saved
Which of the following statements is not true for an enterprise-class database system?
Question 2 options:

- The database application(s) directly access(es) the database data.
- The DBMS accesses the database data.
- The database application(s) interact(s) with the DBMS.
- The application generates SQL statements.

Question 3 (1 point)

Saved
Addition of the capabilities for procedural programming cannot be achieved using SQL. This is because SQL queries are processed completely by the database.
Question 3 options:

- True
- False

Question 4 (1 point)

Saved
Subqueries and joins are both used to process multiple data in tables. Subqueries can be used to retrieve data from a number of tables except the top table.
Question 4 options:

- True
- False

Question 5 (1 point)

Saved
An identifier is the same to thing to an entity as a key is to the relation. Therefore, an identifier of an entity is used as the foreign key of the corresponding table.
Question 5 options:

- True
- False

Question 6 (1 point)

Saved
Surrogate keys are non-primary keys assigned automatically by the computer.
Question 6 options:

- True
- False

Question 7 (1 point)

Saved
Your colleagues at work have proposed lots of changes required to be made towards a database design project at your office. At which of the following stages can changes be easily made in your database design project?
Question 7 options:

- The database design stage
- The design implementation stage
- The database installation stage
- The data model stage

Question 8 (1 point)

Saved
In databases, all tables are relations, but not all relations are tables.
Question 8 options:

- True
- False

Question 9 (1 point)

Saved
In database management systems, increasing features or power, comes with an additional increase in how difficult it is to use.
Question 9 options:

- True
- False

Question 10 (1 point)

Saved
When a database are designed it could be by redesign, from already existing data or as new system's development.
Question 10 options:

- True
- False

Question 11 (1 point)

Saved
SQL is a full featured programming data language such as Java and C for creating and processing database data.
Question 11 options:

- True

- False

Question 12 (1 point)

Saved
Two different techniques for querying data from two or more tables are:
Question 12 options:

- SQL Cross and Natural joins
- SQL INNER and OUTER joins
- SQL SELECT and WHERE statements
- SQL subquery and joins
- SQL UNION and UNION ALL statements

Question 13 (1 point)

Saved
One use of subtypes is to avoid value inappropriate nulls.
Question 13 options:

- True
- False

Question 14 (1 point)

Saved
Which of the following is true about the functional dependency (M, Y) → (R, V)?
Question 14 options:

- M and Y together are determined by R and V together.
- M is the determinant of R.
- M and Y together determine V.
- R and V together determine M.
- M determines Y.

Question 15 (1 point)

Saved
Relationships between entities can be expressed using foreign keys, while relationships between relations can be expressed using both primary and foreign keys.
Question 15 options:

- True
- False

Question 16 (1 point)

Saved
Two or more tables are joined by giving the table names in the WHERE clause and specifying the equality of the respective column names as a condition in the GROUP BY clause.
Question 16 options:

- True

- False

Question 17 (1 point)

Saved
SQL is common in enterprise-class DBMS products and is not suitable for single-user databases.
Question 17 options:

- True
- False

Question 18 (1 point)

Saved
A table that duplicates data is susceptible to update anomalies. Such tables with this type of inconsistencies is said to have:
Question 18 options:

- Anormaly integrity problem
- Referential integrity problem
- Data integrity problem
- Domain integrity problem
- All of the above

Question 19 (1 point)

Saved
Inconsistent values problem occurs when different users or different data sources use the same forms of the same data value.
Question 19 options:

- True
- False

Question 20 (1 point)

Saved
Advantage(s) of denormalization is (are):
Question 20 options:

- faster updating
- faster querying
- less complex SQL in application code
- A and B
- B and C

Question 21 (1 point)

Saved
The requirement that all values of an attribute should be of the same kind is known as:
Question 21 options:

- Entity integrity constraints

- Entity requirement constraint
- Database integrity constraints
- Domain integrity constraint
- None of the above

Question 22 (1 point)

Saved
The supertype contains all common attributes, while the subtype may have a discriminator which shows the supertype.
Question 22 options:

- True
- False

Question 23 (1 point)

Saved
To create an overall database integrity means that one will have useful and meaningful data. In order to achieve this, three constraints are considered which includes:
Question 23 options:

- Referential, entity and class integrity constraint
- Entity, referential and model integrity constraint
- Domain, entity and referential integrity constraint
- Domain referential and model integrity constraint
- All of the above

Question 24 (1 point)

Saved
Common challenges that can be encountered in database design using existing data does not include:
Question 24 options:

- Inconsistent values
- inconsistent data model problem
- Missing value problem
- General purpose remarks column

Question 25 (1 point)

Saved
In order to insert data, create tables, modify or delete data we use Data Modification Langauage (DML).
Question 25 options:

- True
- False

Question 26 (1 point)

Saved

Controling application and performing its logic, processing queries and forms are all tasks carried out by the:
Question 26 options:

- Database tables
- SQL database queries
- Database applications
- Database users
- All of the above

Question 27 (1 point)

Saved
A primary key is a candidate key selected as the primary means of identifying rows in a relation. Choose which of the following statements that are true.
Question 27 options:

- There is only one primary key per relation.
- The primary key may be a composite key.
- The ideal primary key is short, numeric, and never changes.
- All of the above
- Only A and B are true.

Question 28 (1 point)

Saved
A missing value or NULL value is a value that has never been provided. To check for null values we use the SQL IS NOT NULL operator.
Question 28 options:

- True
- False

Question 29 (1 point)

Saved
One supertype relates to at most one subtype in an exclusive relationship, while in an inclusive relationship, one subtype can relate with one or more supertypes.
Question 29 options:

- True
- False

Question 30 (1 point)

Saved
Anomalies from multivalued dependencies can create problems. In order to avoid such propblems:
Question 30 options:

- Modify the tables of a multivalued dependency and separate them into two
- You place the columns of a multivalued dependency into a separate table
- You place the rows of a multivalued dependency into a separate table

- You replace the table with another table

Question 31 (1 point)

Saved
While designing a database, the table ACADEMIC(AcadaID, LastName, FirstName, Phone, Publication_1, Publication_2, Publication_3) can pose an example of:
Question 31 options:

- Multirow, Multicolumn problem
- An inconsistent value problem
- Functional dependency problem
- Multivalued, Multicolumn problem

Question 32 (1 point)

Saved
Structured query language is used by few database management systems to create queries and retrieve information from the database.
Question 32 options:

- True
- False

Question 33 (1 point)

Saved
The SQL clause that controls which groups are in the query result is called:
Question 33 options:

- The GROUP BY clause
- The ORDER BY clause
- The HAVING clause
- The IN and NOT IN clause
- The DISTINCT clause

Question 34 (1 point)

Saving...
Business intelligence systems mainly assist managers to:
Question 34 options:

- Assess, plan and control
- Count tables, data and relationships
- Create tables, columns and rows
- Analyze, create data and relationships
- All of the above

Question 35 (1 point)

Saved

While using information systems that assist in decision making, data is extracted from operational databases to the:
Question 35 options:

- Data warehouse DBMS
- Data extraction DBMS
- Business Intelligence applications
- All of the above
- None of the above

Question 36 (1 point)

Saved
From the two tables name BUILDING and COMPANY, you are required to check the referential integrity constraint:

COMPANY.BuildingNumber must exist in BUILDING.BuildingNumber

The SQL query exceuted is:

```
SELECT BuildingNumber
FROM COMPANY
WHERE BuildingNumber NOT IN (SELECT BuildingNumber
FROM BUILDING);
```

Which of the following will be displayed in the results of this query?
Question 36 options:

- All values of BuildingNumber that match the constraint.
- All values of BuildingNumber where COMPANY.BuildingNumber = BUILDING.CustomerNumber.
- All values of BuildingNumber that are in BUILDING but not in COMPANY.
- All values of BuildingNumber that violate the constraint.
- A and B are correct

Question 37 (1 point)

Saved
A disadvantage of Normalization is the fact that:
Question 37 options:

- It could require writing complex SQL for querying multiple tables
- It can eliminate modification anormalies
- It can make single table queries run faster
- It can make the DBMS run faster than required

Question 38 (1 point)

Saved
A database stores data, and is incomplete if it shows the relationships among the rows of data.
Question 38 options:

- True

- False

Question 39 (1 point)

Saved
When we have one or more foreign keys in a relation, it:
Question 39 options:

- stops the elimination of modification anomalies
- stops complex SQL creation for multitable subqueries and joins
- stops the elimination of duplicated data
- All of the above

Question 40 (1 point)

Saved
A determinant is unique in a relation if and only if it determines every other column in the relation.
Question 40 options:

- True
- False

Question 41 (1 point)

Saved
Normalization eliminates modification anomalies and data duplication.
Question 41 options:

- True
- False

Question 42 (1 point)

Saved
Columns in a database table stores data about an occurence of a thing of interest.
Question 42 options:

- True
- False

Question 43 (1 point)

Saved
Assuming the "Total" column of an INVENTORY table contains integer data, what does COUNT(Total) compute?
Question 43 options:

- The number of distinct values in the Total column
- The number of non-null values in the Total column
- The number of rows in the INVENTORY table
- The number of non-zero values in the Total column

Question 44 (1 point)

Saved
The minimum cardinality from an ID-dependent entity to the parent entity is rarely one.

Question 44 options:

- True
- False

Question 45 (1 point)

Saving...
Your assignment at your new workplace is to design an updateable database. To explain to your colleagues the difference between designing an updateable and read-only database, you inform them that:
Question 45 options:

- You need to ensure that anomalies are removed in the updateable database
- All relations should be BCNF in an updateable database
- You may not use tables in BCNF for read-only databases.
- You can design both databases the same way as long as they are in INF
- A AND B are correct
- A, C and D are correct
- A, B and C are correct

Question 46 (1 point)

Saved
The dashed line connecting strong or a non-ID-dependent weak entity to the parents is known as:
Question 46 options:

- Non-defending relationship
- Non-identifying relationship
- Identifying relationship
- Database referential intergrity relationship
- Defending entity relationship

Question 47 (1 point)

Saved
Results obtained when we execute SQL queries are determined by a set of values known as:
Question 47 options:

- SQL equations
- SQL inequalities and operators
- SQL expressions
- All of the above
- None of the above

Question 48 (1 point)

Saved
A small database can be identified because it has simple structures.
Question 48 options:

- True

- False

Question 49 (1 point)

Saved
Relational databases store data in tables in a meaningful way, such that useful information cannot be retrieved.
Question 49 options:

- True
- False

Question 50 (1 point)

Saved
As part of designing a database using normalization, you need to conduct interviews with database system users.
Question 50 options:

- True
- False

Question 51 (1 point)

Saved
Two or more tables are joined by giving the table names in the WHERE clause and specifying the equality of the respective column names as a condition in the GROUP BY clause.
Question 51 options:

- True
- False

Question 52 (1 point)

Saved
Joins are used to combine parts or all of two or more tables. In recent times, the right way to write SQL join operations is by using
Question 52 options:

- Implicit SQL JOIN ON syntax
- Explcit SQL JOIN ON syntax
- Implicit SQL JOIN AND syntax
- Explicit SQL JOIN AND syntax

Question 53 (1 point)

Saved
Recursive relationships occur when an entity has a relationship with itself. Therefore, the valid patterns of recursive relationships include:
Question 53 options:

- N:M, N:1 and not 1:1
- N:M, 1:N and 1:1
- 1:1, 1:N but not N:M
- All of the above

- None of the above

Question 54 (1 point)

Saved
Which of the following is used to limit the possible values of a foreign key.
Question 54 options:

- Surrogate key
- Functional dependency
- Referential integrity constraint
- Domain integrity constraint
- Composite key

Question 55 (1 point)

Saved
The archetype pattern is a result of a non-ID-dependent child entity being a physical manifestation of a logical parent.
Question 55 options:

- True
- False

Question 56 (1 point)

Saved
While designing a database, which of the following methods should not be used?
Question 56 options:

- Design from existing data
- Design as new system development
- Redesign of the database system
- All of the above can be used
- None of the above can be used

Question 57 (1 point)

Saved
Referential integrity constraints are enforced by
Question 57 options:

- The database relationships
- The users of the database
- The database management system
- The data in the SQL queries
- None of the above

Question 58 (1 point)

Saved

When the source of an anormaly is functional dependecies, the table design principles applied is to ensure that:
Question 58 options:

- Each multivalued dependecy is moved to its own table.
- Every constraint is made a consequence of candidate keys and domains.
- Every determinant is a candidate key.
- All of the above

Question 59 (1 point)

Saved
To make indexes, read and modify data in the database are duties performed by the:
Question 59 options:

- Database
- Database management system
- Database SQL queries
- Database applications
- All of the above

Question 60 (1 point)

Saved
A relation is in BCNF if and only if it is in 3NF, and every determinant is a candidate-key.
Question 60 options:

- True
- False