Time left 0:14:22

Question **1**
Not yet answered

Marked out of 1.00

Which phase of the Waterfall model involves the validation of database design against user requirements?

- ○ a.   Development phase
- ○ b.   Summarization phase
- ● c.   Implementation phase
- ○ d.   Explanation phase

Clear my choice

Question **2**
Not yet answered

Marked out of 1.00

How does the Waterfall model facilitate project monitoring and control?

- ○ a.   Through continuous integration
- ○ b.   Through regular feedback loops
- ● c.   Through phase-based milestones
- ○ d.   Through dynamic resource allocation

Clear my choice

Question **3**
Not yet answered

Marked out of 1.00

The SQL UPDATE statement is used to insert new records into a table. Is the statement TRUE or FALSE?

- ○ a.   TRUE
- ● b.   FALSE

Clear my choice

Question 4

Not yet answered

Marked out of 1.00

In the context of data modeling, what does the term "cardinality" refer to?

- ○ a.   The data type of an attribute
- ● b.   The relationship between two entities
- ○ c.   The number of columns in a table
- ○ d.   The size and complexity of a database

Clear my choice

Question 5

Not yet answered

Marked out of 1.00

What is a nested SELECT statement in SQL?

- ○ a.   A SELECT statement that retrieves all columns from a table.
- ● b.   A SELECT statement used within another SELECT statement.
- ○ c.   A SELECT statement that involves multiple JOIN operations.
- ○ d.   A SELECT statement that retrieves distinct values from a column.

Clear my choice

Question 6

Not yet answered

Marked out of 1.00

In a conceptual data model, what is the purpose of using weak entities?

- ○ a.   To simplify the model
- ○ b.   To represent entities with strong relationships
- ○ c.   To enforce referential integrity
- ● d.   To handle entities with incomplete or uncertain identification

Clear my choice

Question 7

Not yet answered

Marked out of 1.00

What is the primary focus of a Data Engineer in the context of databases?

- ○ a.   Designing and maintaining database systems
- ○ b.   Developing algorithms for data analysis
- ● c.   Designing and building data pipelines and infrastructure
- ○ d.   Creating user interfaces for database applications

Clear my choice

Question 8

Not yet answered

Marked out of 1.00

Which component of a database API is responsible for translating API calls into database-specific SQL commands?

- ○ a. API Connector
- ○ b. Query Compiler
- ○ c. SQL Translator
- ● d. Database Driver

Clear my choice

Question 9

Not yet answered

Marked out of 1.00

How does JDBC differ from ODBC?

- ● a. JDBC is platform-independent, while ODBC is platform-dependent
- ○ b. ODBC is specific to Java programming, while JDBC is not
- ○ c. JDBC is only used for Oracle databases, while ODBC is more versatile
- ○ d. ODBC is a programming language, while JDBC is an interface

Clear my choice

Question 10

Not yet answered

Marked out of 1.00

Which of the following SQL statement deletes all records from a table named 'orders' where the status is 'Cancelled'?

- ● a. DELETE FROM orders WHERE status = 'cancelled'
- ○ b. REMOVE FROM orders WHERE status = 'cancelled'
- ○ c. REMOVE * FROM orders WHERE status = 'cancelled'
- ○ d. DELETE * FROM orders WHERE status = 'cancelled'

Clear my choice

Question 11

Not yet answered

Marked out of 1.00

How does the use of a unique constraint contribute to the development of relations in a relational data model?

- ○ a. A unique constraint prevents relationships between tables.
- ● b. A unique constraint enforces the uniqueness of values in a column, supporting relationships.
- ○ c. A unique constraint allows null values in a column.
- ○ d. A unique constraint is only applicable to primary keys.

Clear my choice

Question 12

Not yet answered

Marked out of 1.00

What does the SQL SELECT * FROM tablename statement do?

- ○ a.   Retrieves the table definition
- ○ b.   Retrieves a specific column from the table
- ○ c.   Retrieves only the first column from the table
- ● d.   Retrieves all columns and records from the table

Clear my choice

Question 13

Not yet answered

Marked out of 1.00

In an ER diagram, what does the term "mandatory participation" mean?

- ○ a.   Specifying the order of records in a table
- ○ b.   Ensuring referential integrity
- ○ c.   Indicating that every entity in the superclass must participate in the subtype
- ● d.   Describing the degree of participation of entities in a relationship

Clear my choice

Question 14

Not yet answered

Marked out of 1.00

Which role focuses on designing and implementing the structure and organization of databases?

- ○ a.   Database Administrator (DBA)
- ○ b.   Database Developer
- ● c.   Database Architect
- ○ d.   Data Analyst

Clear my choice

Question 15

Not yet answered

Marked out of 1.00

Which technique is crucial for maintaining database performance during alterations?

- ● a.   Query optimization
- ○ b.   Data migration
- ○ c.   Database replication
- ○ d.   Data deduplication

Clear my choice

Question 16

Not yet answered

Marked out of 1.00

When altering a table, what is the purpose of the DROP COLUMN clause?

- ○ a.   Remove all columns from a table
- ○ b.   Add a new column to a table
- ● c.   Delete a specific column from a table
- ○ d.   Change the data type of a column

Clear my choice

Question 17

Not yet answered

Marked out of 1.00

Functional dependencies are crucial for identifying relationships between tables and minimizing data anomalies. Is the statement TRUE or FALSE?

- ● a.   TRUE
- ○ b.   FALSE

Clear my choice

Question 18

Not yet answered

Marked out of 1.00

How does the Waterfall model manage dependencies between project phases?

- ○ a.   By allowing parallel execution
- ● b.   By minimizing phase overlap
- ○ c.   By encouraging phase skipping
- ○ d.   By promoting iterative development

Clear my choice

Question 19

Not yet answered

Marked out of 1.00

What is the primary goal of normalization in database programming?

- ○ a.   Increase data redundancy
- ○ b.   Optimize query performance
- ● c.   Organize data to reduce redundancy and dependency
- ○ d.   Implement complex relationships

Clear my choice

Question 20

Not yet answered

Marked out of 1.00

The maximum length of a CHAR data type is fixed and must be specified when defining the column. Is the statement TRUE or FALSE?

- ○ a.   TRUE
- ○ b.   FALSE

Clear my choice

Question 21

Not yet answered

Marked out of 1.00

What is the role of a Transaction Manager in the context of Database APIs?

- ○ a.   Manages database backups and Isolation.
- ● b.   Coordinates and ensures the integrity of database transactions
- ○ c.   Defines the structure of the database schema
- ○ d.   Facilitates communication between different databases

Clear my choice

Question 22

Not yet answered

Marked out of 1.00

In a logical data model, primary keys are essential for uniquely identifying records within a table.
Is the statement TRUE or FALSE?

- ● a.   TRUE
- ○ b.   FALSE

Clear my choice

Question 23

Not yet answered

Marked out of 1.00

What is the purpose of the SQL SAVEPOINT statement?

- ○ a.   To save the current transaction
- ○ b.   To create a backup of the database
- ● c.   To mark a point within a transaction to which you can later roll back
- ○ d.   To permanently save changes made during the current transaction

Clear my choice

Question 24

Not yet answered

Marked out of 1.00

In an ER diagram, what does the term "optional participation" mean?

- ○ a.   Indicating that every entity in the superclass must participate in the subtype
- ● b.   Describing the degree of participation of entities in a relationship
- ○ c.   Ensuring referential integrity
- ○ d.   Specifying the order of records in a table

Clear my choice

Question 25

Not yet answered

Marked out of 1.00

Which interface in JDBC is responsible for executing SQL queries and returning results? Ê

- ○ a.   JDBCConnection Ê
- ● b.   Statement Ê
- ○ c.   ResultSet
- ○ d.   DatabaseMetaData

Clear my choice

Question 26

Not yet answered

Marked out of 1.00

What is Static SQL?

- ○ a.   SQL statements generated in the source code at runtime
- ● b.   SQL statements embedded in the source code at compile time
- ○ c.   SQL statements executed without a predefined schema
- ○ d.   SQL statements with changing parameters

Clear my choice

Question 27

Not yet answered

Marked out of 1.00

The SQL data type used for storing integers with a small range is:

- ○ a.   INT
- ○ b.   BIGINT
- ○ c.   MEDIUMINT
- ● d.   SMALLINT

Clear my choice

Question 28

Not yet answered

Marked out of 1.00

What does the Entity Integrity Constraint in a relational database ensure?

- ○ a.   Every column has a unique identifier
- ○ b.   Every row in a table is unique
- ● c.   Every table has a primary key
- ○ d.   Every entity has a foreign key

Clear my choice

Question 29

Not yet answered

Marked out of 1.00

Decomposition in the context of normalization refers to:

- ○ a.   Combining two tables into one
- ● b.   Breaking down a higher normal form table into multiple tables
- ○ c.   Creating a view from existing tables
- ○ d.   Adding redundancy to a database

Clear my choice

Question 30

Not yet answered

Marked out of 1.00

Which of the following is an advantage of using an Object-Relational Mapping (ORM) approach in SQL implementation?

- ○ a.   Increased database security
- ○ b.   Improved query performance
- ● c.   Simplified data retrieval and manipulation
- ○ d.   Reduced network latency

Clear my choice

Question 31

Not yet answered

Marked out of 1.00

Which SQL statement is used to roll back the changes made during the current transaction?

- ○ a.   REVERT
- ○ b.   UNDO
- ○ c.   CANCEL
- ● d.   ROLLBACK

Clear my choice

Question 32

Not yet answered

Marked out of 1.00

How does database archiving contribute to database maintenance strategies?

○ a.   By enhancing data encryption techniques

◉ b.   By organizing historical data for long-term storage

○ c.   By summarizing real-time data changes

○ d.   By integrating external data sources seamlessly

Clear my choice

Question 33

Not yet answered

Marked out of 1.00

Which term is used to describe the collection of attributes that characterize a real-world entity in a relation?

◉ a.   Tuple

○ b.   Schema

○ c.   Record

○ d.   Table

Clear my choice

Question 34

Not yet answered

Marked out of 1.00

In Embedded SQL, what is the purpose of the EXEC SQL statement?

○ a.   Execute a stored procedure

◉ b.   Execute an SQL statement

○ c.   Execute a shell command

○ d.   Execute a loop in the program

Clear my choice

Question 35

Not yet answered

Marked out of 1.00

Which SQL keyword is used to retrieve all columns from a table in a subquery?

○ a.   SELECT ALL

○ b.   SELECT COLUMNS

◉ c.   SELECT *

○ d.   SELECT FIELDS

Clear my choice

Question 36
Not yet answered

Marked out of 1.00

A relation in Third Normal Form (3NF) is always in Second Normal Form (2NF). Is the statement TRUE or FALSE?

- ● a.   TRUE
- ○ b.   FALSE

Clear my choice

Question 37
Not yet answered

Marked out of 1.00

What is the purpose of an exclusion constraint in a conceptual data model?

- ○ a.   Enforcing referential integrity
- ● b.   Preventing certain combinations of values in a table
- ○ c.   Defining unique identifiers
- ○ d.   Establishing foreign key relationships

Clear my choice

Question 38
Not yet answered

Marked out of 1.00

What is the purpose of the SAVEPOINT statement in a database transaction?

- ○ a.   Commit the transaction and start new transaction
- ● b.   Create a point to which a transaction can be rolled back
- ○ c.   Lock the database for exclusive access and roll back.
- ○ d.   Retrieve data from the database

Clear my choice

Question 39
Not yet answered

Marked out of 1.00

In a normalized relational schema, redundancy is minimized by organizing data to reduce dependency among attributes. Is the statement TRUE or FALSE?

- ● a.   TRUE
- ○ b.   FALSE

Clear my choice

Question 40

Not yet answered

Marked out of 1.00

What technique is used to merge multiple databases into a single logical unit for easier management?

- ○ a. Database mirroring
- ○ b. Data partitioning
- ● c. Database clustering
- ○ d. Data archiving

Clear my choice