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Marks 18.00/20.00

Grade 90.00 out of 100.00

Question 1

Correct

Mark 1.00 out of 1.00

What is the primary purpose of ODBC (Open Database Connectivity)?

- ☐ a. To define the structure of a database schema
- ☒ b. To facilitate communication between applications and databases ✓
- ☐ c. To manage database security protocols
- ☐ d. To optimize SQL queries for performance

Question 2

Correct

Mark 1.00 out of 1.00

What is the purpose of an associative entity in a conceptual data model?

- ☒ a. To represent a many-to-many relationship directly ✓
- ☐ b. To store calculated values
- ☐ c. To establish a foreign key relationship
- ☐ d. To improve query performance

Question 3

Correct

Mark 1.00 out of 1.00

Which of the following components is responsible for translating ODBC calls into database-specific commands?

- ☐ a. ODBC Driver Manager
- ☐ b. ODBC Data Source
- ☐ c. ODBC API
- ☒ d. ODBC Driver ✓

Question 4

Correct

Mark 1.00 out of 1.00



Which of the following statement is True?

- ☐ a. A check constraint prevents null values in a column, ensuring data consistency.
- ☒ b. A check constraint validates the data in a column based on a specified condition, ensuring data integrity. ✓
- ☐ c. A check constraint is used to create hierarchical relationships between tables.
- ☐ d. A check constraint is irrelevant to data integrity in a relational data model.

Question 5

Correct

Mark 1.00 out of 1.00

What is the purpose of a Database Connector in the context of Database APIs?

- ☐ a. Establishes a connection one database to another
- ☒ b. Establishes a connection between a software application and a database ✓
- ☐ c. Defines the structure of the database
- ☐ d. Manages database transactions

Question 6

Correct

Mark 1.00 out of 1.00

What is the significance of data models in the context of database design and management?

- ☐ a. Data models are irrelevant to database design.
- ☐ b. Data models are only useful for graphical representation.
- ☒ c. Data models provide a blueprint for organizing data and understanding relationships in database design. ✓
- ☐ d. Data models only focus on query optimization.

Question 7

Correct

Mark 1.00 out of 1.00

If a functional dependency exists between attributes A and B, and B is a subset of A, what is this relationship called?

- ☒ a. Trivial dependency ✓
- ☐ b. Non-trivial dependency
- ☐ c. Composite dependency
- ☐ d. Partial dependency

Question 8

Correct

Mark 1.00 out of 1.00



What distinguishes the role of a Database Consultant from other database professionals?

- ☐ a. Consultants focus solely on database administration tasks.
- ☒ b. Consultants work independently and provide expertise to multiple clients. ✓
- ☐ c. Database Consultants are synonymous with Database Developers.
- ☐ d. Database Consultants primarily focus on data analysis.

Question 9

Correct

Mark 1.00 out of 1.00

When using the SQL statement `CREATE TABLE orders (order_id INT PRIMARY KEY, product_id INT REFERENCES products(id));`, what does "REFERENCES products(id)" specify?

- ☐ a. Adds a new table named "products(id)"
- ☐ b. Modifies the "products" table structure
- ☒ c. Creates a foreign key constraint on "order_id" referencing "products(id)" ✓
- ☐ d. Deletes the "products" table

Question 10

Correct

Mark 1.00 out of 1.00

Which command adds a new column named "category" to a table named "items" and set its default value to 'Uncategorized'?

- ☒ a. `ALTER TABLE items ADD COLUMN category VARCHAR(50) DEFAULT 'Uncategorized'` ✓
- ☐ b. `Alter COLUMN category TO items DEFAULT 'Uncategorized'`
- ☐ c. `MODIFY TABLE items ADD category VARCHAR(50) DEFAULT 'Uncategorized'`
- ☐ d. `INSERT INTO items (category) VALUES ('Uncategorized')`

Question 11

Correct

Mark 1.00 out of 1.00

In a well-designed relational schema, what is the significance of referential integrity constraints?

- ☐ a. To introduce redundancy
- ☐ b. To enforce data anomalies
- ☒ c. To establish relationships between tables ✓
- ☐ d. To complicate the normalization process

Question 12

Correct

Mark 1.00 out of 1.00



How do you use a subquery to retrieve records where a column's values are greater than the average value of that column?

- ☐ a. SELECT * FROM table WHERE column > AVG(column)
- ☒ b. SELECT * FROM table WHERE column > (SELECT AVG(column) FROM table) ✓
- ☐ c. SELECT * FROM table HAVING column > AVG(column)
- ☐ d. SELECT * FROM table JOIN (SELECT AVG(column) FROM table) ON column > avg_value

Question 13

Incorrect

Mark 0.00 out of 1.00

What is the term for indicating that every entity in the superclass must participate in the subtype?

- ☐ a. Optional participation
- ☐ b. Mandatory participation
- ☐ c. Voluntary participation
- ☒ d. Compulsory participation ✗

Your answer is incorrect.

Question 14

Correct

Mark 1.00 out of 1.00

How do you use the SQL NOT IN operator in a subquery to exclude certain values?

- ☒ a. SELECT * FROM table WHERE column NOT IN (value1, value2) ✓
- ☐ b. SELECT * FROM table WHERE column EXCLUDES (value1, value2)
- ☐ c. SELECT * FROM table WHERE column EXCEPT (value1, value2)
- ☐ d. SELECT * FROM table WHERE column NOT EQUALS (value1, value2)

Question 15

Correct

Mark 1.00 out of 1.00

How does functional dependency contribute to the normalization process?

- ☐ a. By introducing data redundancy
- ☐ b. By simplifying data retrieval
- ☐ c. By identifying relationships between tables
- ☒ d. By eliminating data redundancy ✓

Question 16

Correct

Mark 1.00 out of 1.00



What is the main purpose of using the ROLLBACK statement in a database transaction?

- ☐ a. Commit the changes made during the transaction
- ☒ b. Undo the changes made during the transaction ✓
- ☐ c. Retrieve data from the database
- ☐ d. Lock the database for exclusive access

Question 17

Correct

Mark 1.00 out of 1.00

What is the purpose of the PRIMARY KEY constraint in a table?

- ☒ a. Ensures unique values in a column ✓
- ☐ b. Allows NULL values in a column
- ☐ c. Adds a default value to a column
- ☐ d. Specifies the data type of a column

Question 18

Incorrect

Mark 0.00 out of 1.00

What impact does updating a primary key value in a parent table have on its child table with a referential integrity constraint?

- ☐ a. No impact
- ☐ b. Child table is updated accordingly
- ☐ c. Child tuple is deleted and must be reinserted
- ☒ d. An error occurs (b) ✗

Question 19

Correct

Mark 1.00 out of 1.00

Which phase of the Waterfall model involves the design and development of database schema?

- ☒ a. Construction phase ✓
- ☐ b. Integration phase
- ☐ c. Summarization phase
- ☐ d. Compilation phase

Question 20

Correct

Mark 1.00 out of 1.00



What distinguishes the Waterfall model from the Agile methodologies in database development?



- ☐ a. Continuous integration
- ☐ b. Incremental iterations
- ☒ c. Sequential progression ✓
- ☐ d. Dynamic requirements