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1- _____ represents the data in the database at a moment.

a. Database model
b. Data Model
c. Database state
d. Database Schema
e. Data Integrity

2- These are the main benefits of using DBMS to manage data in applications **EXCEPT**?

a. Data Administration
b. Data Integrity and Security
c. Concurrent Access and Crash Recovery
d. Data Independence
e. Efficient Unstructured Data Access

3- A DBMS must guarantee that the changes made by incomplete transactions are removed from the database. To do so, DBMS maintains a _____ of all writes to the databases.

a. lock
b. log
c. checkpoint
d. buffer
e. view

4- When would you **not** store data in RDBMS?

a. An online store with a collection of data on customers, products, and employees.
b. A company with a collection of 1 billion web pages.
c. A university with a collection of data on students, professors and courses.
d. An insurance company with a collection of data to be used for a credit scoring model.
e. A hospital with a collection of data on patients, doctors and clinics.

5- Information about the conceptual, external and physical schemas is stored in the system _____.

a. locks
b. logs
c. tables
d. catalogs
e. views

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1- The _____ of a relationship type corresponds to the number of entity types participating in the relationship type.

a. degree
b. cardinalities
c. domain
d. arity
e. role

2- In the context of databases, _____ refers to the uniqueness of data values contained in a column. High _____ means that the column contains a large percentage of totally unique values. Low _____ means that the column contains a lot of "repeats" in its data range.

a. relationship
b. role
c. domain
d. unique key
e. cardinality

3- A _____ specifies a set of values that may be assigned to an attribute.

a. relationship
b. role
c. domain
d. key
e. cardinality

4- Which one is the proper steps in database data model design?

a. Conceptual, Logical, Physical and External
b. Conceptual, Logical, Physical and View
c. Logical, Conceptual, Physical, External
d. External, Physical, Logical, Conceptual
e. Database, Tables, Columns, Rows, Values

5- _____ specify the minimum or maximum number of relationship instances that an individual entity can participate in.

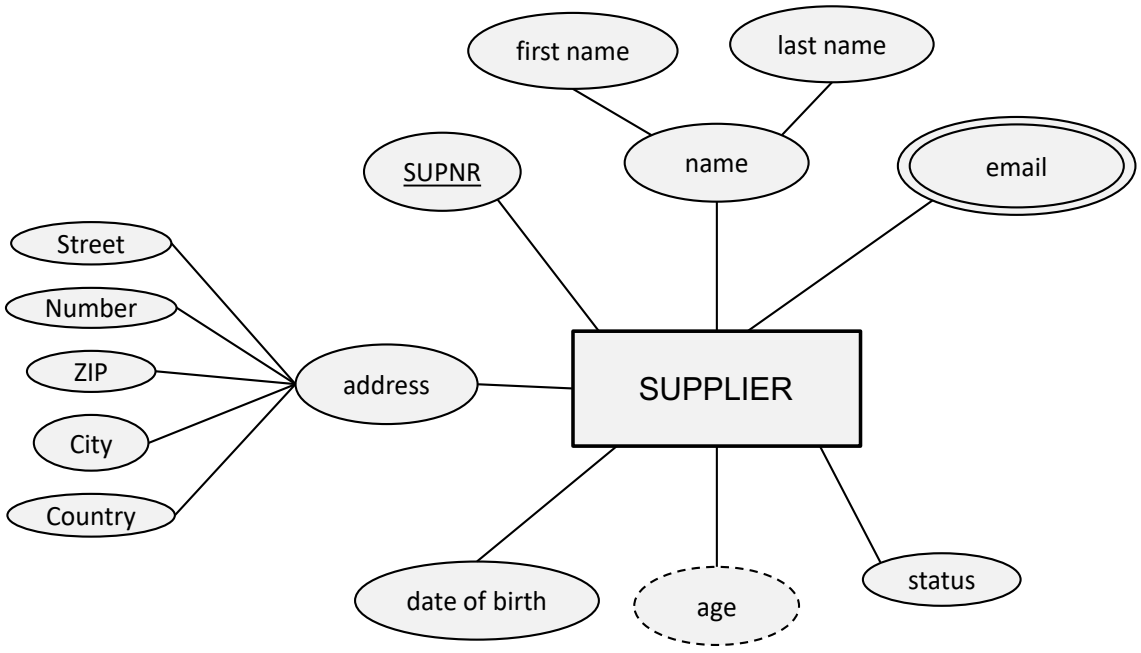
a. Cardinalities
b. Degrees
c. Roles
d. Arity
e. Locks

6- These are all limitations of ER model **EXCEPT**?

a. Functions are not included in the ER model
b. ER model cannot model temporal constraints
c. ER model cannot model weak entities
d. Domains are not included in the ER model
e. ER model cannot guarantee the consistency across multiple relationship types

7- Use the following ER diagram and fill in the blank.

a. **SUPLLIER** is an Entity Type
b. **SUPNR** is a Key Attribute Type
c. **Age** is a Derived Attribute Type
d. **Address (or name)** is a Composite Attribute Type
e. **Email** is a Multi-Valued Attribute Type
f. **Status (or date of birth)** is a Single-Valued Attribute Type



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1- These are all related to integrity constraint **EXCEPT**?

a. Primary key
b. Unique key
c. Integrity key
d. Check
e. Not Null

2- A _____ is a question about the data, and the answer consists of a new relation containing the result.

a. relation type
b. entity type
c. constraint rule
d. relationship sets
e. relational database query

3- Fill the blank for [SELECT … FROM … WHERE …].

a. Entities, Attributes, Filters
b. Attributes, Entities, Filters
c. Attributes, Joins, Filters
d. Entities, Attributes, Joins, Filters
e. None of the above

4- Which Normal Form takes care of dependency of a prime attribute to a non-prime attribute?

a. 1NF
b. 2NF
c. 3NF
d. 4NF
e. BCNF

5- A non-prime attribute is _____.

a. an attribute that is a part of one of the candidate keys
b. a set of attributes which can uniquely identify a tuple
c. the minimal set of attributes which can uniquely identify a tuple
d. an attribute which is not part of any candidate key

6- _____ is not a DML statement.

a. SELECT
b. DELETE
c. UPDATE
d. DROP
e. INSERT

7- Which join method is valid?

a. Left Join
b. Right Join
c. Inner Join
d. Full Join
e. All of the above

8- _____ is not a DLL statement.

a. CREATE TABLE
b. ALTER INDEX
c. DROP TABLE
d. DELETE FROM
e. CREATE VIEW

9- _____ is a process of organizing the data in database to avoid data redundancy and insertion, update and deletion anomaly.

a. Clustered Index
b. Normalization
c. ACID
d. ER Diagram
e. Integrity enforcement

10- _____ means that the results of applying a transaction are permanent, even in the presence of failures.

a. Integrity
b. Atomicity
c. Consistency
d. Isolation
e. Durability