#1. What is normalization in the context of database management?

- [ ] Removing redundancy from data
- [ ] Adding redundancy to data
- [ ] Organizing data into folders
- [ ] Deleting data from the database
- [ ] Backing up the database

#2. Which normal form ensures that non-key attributes are fully functionally dependent on the primary key?

- [ ] First Normal Form (1NF)
- [ ] Second Normal Form (2NF)
- [ ] Third Normal Form (3NF)
- [ ] Fourth Normal Form (4NF)
- [ ] Fifth Normal Form (5NF)

#3. In which normal form is a relation if it is in 2NF and all non-key attributes are fully functionally dependent on the primary key?

- [ ] Third Normal Form (3NF)
- [ ]

Fourth Normal Form (4NF)

☐

Fifth Normal Form (5NF)

☐

Second Normal Form (2NF)

☐

First Normal Form (1NF)

#4. Which of the following is a reason for normalizing a database?

☐

Reducing redundancy and improving data integrity

☐

Increasing data duplication

☐

Simplifying query complexity

☐

Slowing down data retrieval

☐

Enhancing primary key constraints

#5. What does the term “functional dependency” mean in the context of normalization?

☐

A dependency between two attributes

☐

A relation between tables

☐

A connection between databases

☐

A correlation between records

☐

A hierarchy between data items

#6. Which normal form deals with partial dependencies on a composite primary key?

☐
Second Normal Form (2NF)
☐
Third Normal Form (3NF)
☐
Fourth Normal Form (4NF)
☐
Fifth Normal Form (5NF)
☐
Sixth Normal Form (6NF)

#7. In which normal form are non-prime attributes fully functionally dependent on every candidate key of the relation?

☐
Fourth Normal Form (4NF)
☐
Second Normal Form (2NF)
☐
Third Normal Form (3NF)
☐
Fifth Normal Form (5NF)
☐
Sixth Normal Form (6NF)

#8. Which of the following is a multivalued dependency?

☐
A relationship between tables
☐
A dependency between two attributes

☐
A relation between databases
☐
A correlation between records
☐
A hierarchy between data items

#9. Which normal form allows only full functional dependencies between the primary key and other attributes?

☐
Third Normal Form (3NF)
☐
First Normal Form (1NF)
☐
Second Normal Form (2NF)
☐
Fourth Normal Form (4NF)
☐
Fifth Normal Form (5NF)

#10. What does BCNF stand for in the context of normalization?

☐
Boyce-Codd Normal Form
☐
Basic Concept Normal Form
☐
Binary Common Normal Form
☐
Balanced Composite Normal Form
☐
Best Candidate Normal Form

#11. Which normal form eliminates the possibility of a transitive dependency between non-key attributes?

☐
Fourth Normal Form (4NF)
☐
Second Normal Form (2NF)
☐
Third Normal Form (3NF)
☐
Fifth Normal Form (5NF)
☐
Sixth Normal Form (6NF)

#12. What is the primary objective of normalization in database design?

☐
Minimizing redundancy and dependency
☐
Maximizing data duplication
☐
Simplifying query complexity
☐
Maximizing data retrieval speed
☐
Enhancing foreign key constraints

#13. In which normal form are attributes dependent only on the primary key?

☐
Second Normal Form (2NF)
☐
Third Normal Form (3NF)
☐
First Normal Form (1NF)

☐
Fourth Normal Form (4NF)
☐
Fifth Normal Form (5NF)

#14. What does the term “candidate key” refer to in normalization?

☐
A set of attributes that uniquely identify a tuple
☐
A unique constraint on a table
☐
A foreign key in another table
☐
A primary key in another table
☐
A composite key in a relation

#15. Which normal form allows a relation to be in 3NF and removes transitive dependencies between non-prime attributes?

☐
Boyce-Codd Normal Form (BCNF)
☐
Second Normal Form (2NF)
☐
Third Normal Form (3NF)
☐
Fourth Normal Form (4NF)
☐
Fifth Normal Form (5NF)

#16. What is the process of decomposing a relation into smaller, more manageable relations called?

☐
Normalization
☐
Denormalization
☐
Decomposition
☐
Redundancy
☐
Aggregation

#17. Which normal form allows a relation to be in 2NF and removes partial dependencies on a composite primary key?

☐
Third Normal Form (3NF)
☐
Second Normal Form (2NF)
☐
Fourth Normal Form (4NF)
☐
Fifth Normal Form (5NF)
☐
Sixth Normal Form (6NF)

#18. Which normal form eliminates transitive dependencies and ensures that a relation is in 3NF?

☐
Third Normal Form (3NF)
☐
Second Normal Form (2NF)
☐
Fourth Normal Form (4NF)

☐
Fifth Normal Form (5NF)
☐
Sixth Normal Form (6NF)

#19. What is the goal of normalization in database design?

☐
Minimizing redundancy and dependency
☐
Maximizing data duplication
☐
Improving query performance
☐
Ensuring data consistency
☐
Simplifying data retrieval

#20. Which normal form allows a relation to be in 4NF and removes multivalued dependencies?

☐
Fifth Normal Form (5NF)
☐
Fourth Normal Form (4NF)
☐
Third Normal Form (3NF)
☐
Second Normal Form (2NF)
☐
Sixth Normal Form (6NF)

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