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**Marks** 5.00/5.00

**Grade** 10.00 out of 10.00 (100%)

### Question 1

Correct

Mark 1.00 out of 1.00

In a database, data redundancy can lead to \_\_\_\_\_

- ☐ a. reduced storage space utilization.
- ☐ b. simplified data updates.
- ☐ c. improved data integrity.
- ☒ d. inefficient use of storage and increased storage requirements. ✓

### Question 2

Correct

Mark 1.00 out of 1.00

In the context of database design, what is the purpose of index structures?

- ☐ a. To introduce data redundancy
- ☐ b. To minimize storage efficiency
- ☒ c. To accelerate data retrieval operations ✓
- ☐ d. To complicate the normalization process

### Question 3

Correct

Mark 1.00 out of 1.00

In the First Normal Form (1NF), every attribute must hold atomic values. What does "atomic" mean in this context?

- ☒ a. Simple and indivisible ✓
- ☐ b. Complex and compound
- ☐ c. Unique and distinct
- ☐ d. Numeric and integer

**Question 4**

Correct

Mark 1.00 out of 1.00



In the context of relational databases, what is a candidate key?

- ☐ a. A key that uniquely identifies all attributes in a relation
- ☐ b. A key that is a subset of the primary key
- ☒ c. A key that can uniquely identify a tuple in a relation ✓
- ☐ d. A key that has the highest cardinality

**Question 5**

Correct

Mark 1.00 out of 1.00

What constitutes the main disadvantage of data redundancy within databases?

- ☐ a. Improved data organization
- ☐ b. Enhanced data retrieval speed
- ☒ c. Increased risk of inconsistencies and errors ✓
- ☐ d. Greater data security