

1. Using the Big University Database Table in the lesson 1 notes, the inadvertent (unintended) removal of a student or offering when deleting an enrollment indicates a(n)

1 point

- ☐ insertion anomaly.
- ☐ update anomaly.
- ☒ deletion anomaly.
- ☐ functional dependency.

2. A falsification example for the possible FD  $X \rightarrow Y$  involves

1 point

- ☐ two rows with the same Y value but different X values.
- ☐ two rows with missing Y values in both rows and the same X value in both rows.
- ☒ two rows with the same X value but different Y values.
- ☐ one row with the same X and Y values.

3. Using falsification examples are useful

1 point

- ☒ in subtle situations to obtain user feedback about FDs not involving a primary key or candidate key.
- ☐ for all functional dependencies.
- ☐ to indicate functional dependencies based on primary keys.
- ☐ to indicate functional dependencies based on candidate keys.

4. In an FD, the right-hand side (RHS) is known as the determinant.

1 point

- ☐ True
- ☒ False

5. When identifying a functional dependency for a 1-M relationship, you should specify the functional dependency as

1 point

- ☐ PK in the parent table determines FK in the child table.
- ☒ PK in the child table determines FK in the child table to the parent table.
- ☐ FK in the parent table determines PK in the child table.
- ☐ FK in the child table determines PK in the parent table.

6. A functional dependency specified as  $X \rightarrow Y$  indicates that

1 point

- ☐ for each Y value, there is at most one X value.
- ☒ for each X value, there is at most one Y value.
- ☐ for each Y value, there is at least one X value.
- ☐ for each X value, there is at least one Y value.

7. Using the Big University Database Table in the lesson 1 notes, the requirement to specify values for StdNo and OfferNo when inserting a new course indicates a(n)

1 point

- ☒ insertion anomaly.
- ☐ update anomaly.
- ☐

- ☐ deletion anomaly.
- ☐ functional dependency.

8. Modification anomalies covering insertions, updates, and deletions are caused by

1 point

- ☐ one fact stored in one place.
- ☐ multiple candidate keys.
- ☐ incorrect SQL statements.
- ☒ excessive redundancies in a table design.

9. Using the Big University Database Table in the lesson 1 notes, the requirement to update multiple rows to change the StdClass value of a particular student indicates a(n)

1 point

- ☐ insertion anomaly.
- ☒ update anomaly.
- ☐ deletion anomaly.
- ☐ functional dependency.

10. Indicate value neutral constraints. More than one answer is possible.

1 point

- ☒ Primary key constraint
- ☒ Foreign key constraint
- ☒ Functional dependency
- ☐ CHECK constraint using a constant in the right-hand side such as StdGPA >= 0.

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