How can data normalization be used to check the results of the E-R diagram-to-relational database conversion process? **THIS IS A DATABASE QUESTION**

**Data normalization;**

Data organisation in a database is done by normalisation. This entails building tables and linking those tables together in accordance with principles intended to safeguard the data and increase the database's adaptability by removing duplication and inconsistent reliance.

**ER diagram**

A graphical representation that shows relationships between individuals, things, locations, concepts, or events within an information technology (IT) system is called an entity relationship diagram (ERD), also known as an entity relationship model.

Entity-relationship diagrams are typically converted to relational tables nowadays, and those tables are then checked for compliance with the requirements of data normalization technique.

### **Explanation**

The fundamental concept behind using data normalisation rules to evaluate the structural soundness of relational tables is to look for any partial functional dependencies.

Check to see if any nonkey characteristics depend on or are defined by only a portion of the primary key for the table.

See whether there are any reliants on other things. To determine whether any non-key attributes are reliant on or affected by other non-key attributes (other tan candidate keys)

**Explanation for given term**

**Partial dependency:**

A relational reliance If Y is functionally dependent on X and Y may be determined by any appropriate subset of X, then X->Y is a partial dependency. As an illustration, consider the relationships AC->B, A->D, and D->B.

**Primary key:**

The column or columns that each row in a table uses to uniquely identify itself is known as the primary key. For Optim to insert, update, restore, or delete data from a database table, the table must contain a primary key.

**Transitive Dependency:**

It is the term for any indirect link that results in functional dependency (FC). As a result, A -> C is a transitive dependency if A -> B and B -> C are true. Thus, the Transitive Dependency must be removed in order to obtain 3NF.

**Non-key attribute**

It is one that is not included in any key. The majority of qualities often fit into this category because they are merely descriptive. Choosing key and non-key features is a crucial modelling task that needs considerable thought.

**Candidate key**

It is a single key or a collection of keys that collectively and specifically identify rows in a database. A Candidate key is a subset of Super keys and is free of any extraneous characteristics that are not necessary for tuple identification. For all tuples, the Candidate key value is distinct and non-null.

**Final Answer**

**Conclusion:**

Entity-relationship diagrams are typically converted to relational tables nowadays, and those tables are then checked for compliance with the requirements of data normalization technique.