Integrity constraints and Data Consistency:

- Integrity constraints are rules defined on a database schema to ensure the accuracy and consistency of data. They provide a way to control what values are allowed in certain columns or tables.
- Authorized users may modify the database, and integrity constraints help prevent unintended changes that could lead to data inconsistency or loss.

Integrity Constraints in ER Models:

- In the context of Entity-Relationship (ER) models, integrity constraints play a crucial role in defining the structure and relationships between entities.
- The given options are:
    - a. Key Declarations: This refers to specifying certain attributes as a candidate key for an entity set. A candidate key uniquely identifies each entity in the set.
    - b. Form of a Relationship: This involves defining mapping cardinalities such as 1-1, 1-many, and many-many between entities. It ensures that the relationships between entities are well-defined and adhere to the desired structure. Arbitrary Predicates as Integrity Constraints:
- An integrity constraint is a condition or rule that ensures the accuracy and consistency of data. While it is true that integrity constraints are essential for maintaining data quality, not all arbitrary predicates can serve as integrity constraints. Typically, integrity constraints are predefined rules rather than arbitrary predicates. Ensuring Accuracy and Consistency in Relational Databases:
    - Integrity constraints play a critical role in relational databases by enforcing rules that maintain the accuracy and consistency of data. These rules are defined during the design phase and are applied whenever data is modified.

- Common types of integrity constraints in relational databases include primary key constraints, foreign key constraints, unique constraints, and check constraints. They help ensure that data adheres to predefined rules, preventing errors and maintaining the quality of the database.

In summary, integrity constraints are vital components of database design and management, serving to enforce rules that safeguard data accuracy and consistency across various models, including relational databases and ER models.

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2. What are the advantages and disadvantages of DBMS ?
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5. What is data abstraction ? Explain different levels ofabstraction.
6. Explain the differences between physical level,conceptual level and view level of data abstraction.
7. Explain the difference between database management system (DBMS) and file system.
8. Discuss the architecture of DBMS. What are the types of DBMS architecture ?
9. What are data models ? Briefly explain different types of data models.
10. Describe data schema and instances.
11. Describe data independence with its types
12. Describe the classification of database language. Which type of language is SQL ?
13. Explain DBMS interfaces. What are the various DBMS interfaces ?

14. What is ER model ? What are the elements of ER model ? What are the notations of ER diagram ?
15. What do you understand by attributes and domain ?Explain various types of attributes used in conceptual data model.
16. Construct an ER diagram for University system.
17. Construct an ER diagram for the registrar’s office
18. Explain the primary key, super key, foreign key and candidate key with example. OR Define key. Explain various types of keys.
19. What do you mean by a key to the relation ? Explain the differences between super key, candidate key and primary key.
20. Explain generalization, specialization and aggregation. OR Compare generalization, specialization and aggregation with suitable examples.
21. What is Unified Modeling Language ? Explain different types of UML.
22. What is relational model ? Explain with example.
23. Explain constraints and its types.
24. Consider the following relations:
25. What are the additional operations in relational algebra ?
26. Explain the following constraints : i. Entity integrity constraint. ii. Referential integrity constraint. iii. Domain constraint.
27. Describe mapping constraints with its types.
28. Explain how a database is modified in SQL. OR Explain database modification.
29. Discuss join and types with suitable example. Define join. Explain different types of join.
30. Describe the SQL set operations