

WESTERN GOVERNORS UNIVERSITY (WGU) ITEC2104 C175 DATA MANAGEMENT - FOUNDATIONS PRACTICE EXAM (SAMPLE) STUDY GUIDE



SAMPLE STUDY GUIDE WITH LIMITED QUESTIONS

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THE FULL VERSION STUDY GUIDE**

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Introduction

Preparing for a certification exam can feel overwhelming, but with the right tools, it becomes an opportunity to build confidence, sharpen your skills, and move one step closer to your goals. At Examzify, we believe that effective exam preparation isn't just about memorization, it's about understanding the material, identifying knowledge gaps, and building the test-taking strategies that lead to success.

This guide was designed to help you do exactly that.

Whether you're preparing for a licensing exam, professional certification, or entry-level qualification, this book offers structured practice to reinforce key concepts. You'll find a wide range of multiple-choice questions, each followed by clear explanations to help you understand not just the right answer, but why it's correct.

The content in this guide is based on real-world exam objectives and aligned with the types of questions and topics commonly found on official tests. It's ideal for learners who want to:

- Practice answering questions under realistic conditions,
- Improve accuracy and speed,
- Review explanations to strengthen weak areas, and
- Approach the exam with greater confidence.

We recommend using this book not as a stand-alone study tool, but alongside other resources like flashcards, textbooks, or hands-on training. For best results, we recommend working through each question, reflecting on the explanation provided, and revisiting the topics that challenge you most.

Remember: successful test preparation isn't about getting every question right the first time, it's about learning from your mistakes and improving over time. Stay focused, trust the process, and know that every page you turn brings you closer to success.

Let's begin.

How to Use This Guide

This guide is designed to help you study more effectively and approach your exam with confidence. Whether you're reviewing for the first time or doing a final refresh, here's how to get the most out of your Examzify study guide:

1. Start with a Diagnostic Review

Skim through the questions to get a sense of what you know and what you need to focus on. Your goal is to identify knowledge gaps early.

2. Study in Short, Focused Sessions

Break your study time into manageable blocks (e.g. 30 – 45 minutes). Review a handful of questions, reflect on the explanations.

3. Learn from the Explanations

After answering a question, always read the explanation, even if you got it right. It reinforces key points, corrects misunderstandings, and teaches subtle distinctions between similar answers.

4. Track Your Progress

Use bookmarks or notes (if reading digitally) to mark difficult questions. Revisit these regularly and track improvements over time.

5. Simulate the Real Exam

Once you're comfortable, try taking a full set of questions without pausing. Set a timer and simulate test-day conditions to build confidence and time management skills.

6. Repeat and Review

Don't just study once, repetition builds retention. Re-attempt questions after a few days and revisit explanations to reinforce learning. Pair this guide with other Examzify tools like flashcards, and digital practice tests to strengthen your preparation across formats.

There's no single right way to study, but consistent, thoughtful effort always wins. Use this guide flexibly, adapt the tips above to fit your pace and learning style. You've got this!

Questions

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- 1. What is an attribute in the context of databases?**
 - A. A property or characteristic of an entity
 - B. The primary key of a table
 - C. A type of relationship between tables
 - D. A database operation
- 2. What does the SELECT statement do in SQL?**
 - A. Creates new records in the database
 - B. Retrieves data from a database
 - C. Updates existing records in a table
 - D. Deletes records from a database
- 3. What does Referential Integrity ensure in database management?**
 - A. That only the primary key can be modified
 - B. That relationships between tables are consistent
 - C. That no duplicates exist in the tables
 - D. That all data types match across tables
- 4. Which SQL command is typically used to list names of products sold by a specific salesperson exceeding a certain quantity?**
 - A. SELECT
 - B. INSERT
 - C. UPDATE
 - D. JOIN
- 5. Which type of data describes a many-to-many relationship within a database?**
 - A. Intersection Data
 - B. Transactional Data
 - C. Ad hoc Data
 - D. Hierarchical Data

- 6. Which type of data has a high degree of organization?**
- A. Unstructured Data
 - B. Structured Data
 - C. Binary Data
 - D. Raw Data
- 7. In SQL, which command allows you to specify a condition on rows to be included in a view?**
- A. CREATE CHECK
 - B. CREATE VIEW
 - C. DROP VIEW
 - D. UPDATE VIEW
- 8. Which concept involves managing how entities relate to each other in a database?**
- A. Normalization
 - B. Data Management
 - C. Entity-Relationship Modeling
 - D. Schema Design
- 9. What is the primary purpose of a primary key in a database?**
- A. To allow for data redundancy
 - B. To combine data from different tables
 - C. To uniquely identify each record in a table
 - D. To enhance data security
- 10. What characterizes a one-to-one binary relationship?**
- A. A single occurrence of one entity type is associated with multiple occurrences of another entity type.
 - B. Multiple occurrences of two different entity types are associated with each other.
 - C. A single occurrence of one entity type can only be associated with a single occurrence of another entity type.
 - D. There are three different entity types involved in the relationship.

Answers

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1. A
2. B
3. B
4. A
5. A
6. B
7. B
8. C
9. C
10. C

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Explanations

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1. What is an attribute in the context of databases?

- A. A property or characteristic of an entity**
- B. The primary key of a table
- C. A type of relationship between tables
- D. A database operation

In the context of databases, an attribute refers to a property or characteristic of an entity. When working with database design, entities can represent objects or concepts, such as a person, a product, or an event. Each entity can have several attributes that provide more information about it. For example, if we have an entity called "Employee," relevant attributes could include "Employee ID," "First Name," "Last Name," "Hire Date," and "Department." Each of these attributes helps to define the characteristics of the Employee entity. Other options like the primary key, relationships between tables, and database operations do not accurately capture the definition of an attribute. The primary key is a specific attribute (or a set of attributes) used to uniquely identify a record in a table. Relationships describe how different tables interact with one another, such as one-to-one, one-to-many, or many-to-many. A database operation refers to the various actions that can be performed on the data, including creating, reading, updating, or deleting records (CRUD operations). Understanding attributes is essential for effective database design and data organization.

2. What does the SELECT statement do in SQL?

- A. Creates new records in the database
- B. Retrieves data from a database**
- C. Updates existing records in a table
- D. Deletes records from a database

The SELECT statement in SQL is fundamentally designed to retrieve data from a database. When a SQL query is executed with the SELECT command, it allows users to specify exactly which data they wish to view from one or more tables, including filtering rows, sorting results, and even performing calculations on the selected data. This capability makes it a powerful tool for data analysis and reporting. By using the SELECT statement, you can access specific columns, apply conditions using the WHERE clause, join multiple tables, and organize the output through ORDER BY and GROUP BY clauses. All of these functionalities contribute to its primary purpose of data retrieval, making it an essential component of SQL in managing and interacting with data stored in relational databases.

3. What does Referential Integrity ensure in database management?

- A. That only the primary key can be modified
- B. That relationships between tables are consistent**
- C. That no duplicates exist in the tables
- D. That all data types match across tables

Referential integrity is a critical concept in database management that ensures the relationships between tables remain consistent. When referential integrity is enforced, any foreign key in a table must either match a primary key in another table or be null. This maintains the logical connections between tables, preventing orphan records, which occur when a foreign key references a primary key that has been deleted or does not exist. Ensuring this consistency is vital for relational databases as it preserves the accuracy and reliability of the data being managed. The other options do not accurately describe referential integrity: modifying the primary key, eliminating duplicates, or ensuring matching data types are managed through different mechanisms and do not directly pertain to the concept of relationships in databases.

4. Which SQL command is typically used to list names of products sold by a specific salesperson exceeding a certain quantity?

- A. SELECT**
- B. INSERT**
- C. UPDATE**
- D. JOIN**

The command used to list names of products sold by a specific salesperson exceeding a certain quantity is SELECT. This SQL statement is fundamental for querying information from a database. When constructing an SQL query, the SELECT command enables you to specify the columns you want to retrieve from the database tables. In this scenario, to list products sold by a specific salesperson, you typically start your query with SELECT, followed by the fields of interest, which would include the product names. Additionally, you would combine this with a WHERE clause to filter records based on the salesperson's identity and to specify the quantity exceeding a certain threshold. This allows for precise data retrieval that directly addresses the needs of the query by focusing only on relevant records. Thus, the SELECT command is crucial for retrieving and displaying the desired data from the database.

5. Which type of data describes a many-to-many relationship within a database?

- A. Intersection Data**
- B. Transactional Data**
- C. Ad hoc Data**
- D. Hierarchical Data**

The type of data that describes a many-to-many relationship within a database is intersection data. In databases, many-to-many relationships occur when multiple records in one table are associated with multiple records in another table. To effectively manage and represent this type of relationship, a junction table, also known as an intersection table, is used. Intersection data typically contains foreign keys that reference the primary keys of the two tables involved in the many-to-many relationship. This structure not only allows for the representation of complex relationships between records but also facilitates effective querying and data integrity. In contrast, transactional data pertains to records associated with transactions, such as sales or purchase records, which may or may not illustrate relationships between different entities. Ad hoc data refers to data that is created for a specific purpose and doesn't typically form part of a structured relationship across multiple tables. Hierarchical data is organized in a tree-like structure, representing one-to-many relationships, but does not apply to many-to-many relationships.

6. Which type of data has a high degree of organization?

- A. Unstructured Data
- B. Structured Data**
- C. Binary Data
- D. Raw Data

Structured data is highly organized and formatted in a way that makes it easily searchable in relational databases and other structured data storage systems. This type of data typically resides in fixed fields within a record or file, which could be organized in tables with rows and columns. Examples include data stored in databases, spreadsheets, and structured query language (SQL) systems. The high degree of organization in structured data allows for efficient data retrieval and analysis, enabling users to quickly access relevant information for decision-making processes or reporting. This organized format is essential for enterprise systems and applications that require predictable and consistent data formats. In contrast, unstructured data lacks this level of organization, making it more challenging to manage and analyze. Binary data refers to data represented in a binary format, which is not inherently organized but rather a representation of other types of data. Raw data typically refers to unprocessed or unrefined data, which can also lack organization until it is structured or cleaned for analysis.

7. In SQL, which command allows you to specify a condition on rows to be included in a view?

- A. CREATE CHECK
- B. CREATE VIEW**
- C. DROP VIEW
- D. UPDATE VIEW

The command that allows you to specify a condition on rows to be included in a view is known as the CREATE VIEW command. When you create a view in SQL, you define it by writing a SELECT statement that includes the conditions you want to apply. These conditions often take the form of a WHERE clause within the SELECT statement, allowing you to filter the rows that will be included in the view according to specific criteria. This functionality is crucial because views can encapsulate complex queries, making it easier to manage data presentation and enforce security by restricting access to specific data subsets. Hence, using CREATE VIEW allows you to create a virtual table based on a predefined query, which acts as a focal point for data retrieval that meets the given conditions.

8. Which concept involves managing how entities relate to each other in a database?

- A. Normalization
- B. Data Management
- C. Entity-Relationship Modeling**
- D. Schema Design

The concept that deals specifically with managing how entities relate to each other in a database is known as Entity-Relationship Modeling. This approach provides a visual representation of the data structures and the relationships between different entities within a database. By using diagrammatic tools, such as ER diagrams, you can depict entities (which represent objects or concepts) and the relationships (which show how these entities interact with one another). Entity-Relationship Modeling is essential for understanding the data requirements for applications and serves as a blueprint for database design. It helps in identifying primary keys, foreign keys, and the cardinality of relationships, which are crucial for ensuring that the data integrity is maintained when the database is constructed and queried. While normalization involves organizing data to reduce redundancy and improve data integrity, it doesn't specifically focus on the relationships themselves. Data management encompasses a broader range of practices and policies regarding the handling and governance of data. Schema design refers to the structure of the database as a whole, including tables, fields, and relationships, but it is more about the implementation rather than the initial conceptualization of how entities relate. Thus, Entity-Relationship Modeling is the key concept that specifically addresses the management of relationships among entities in a database context.

9. What is the primary purpose of a primary key in a database?

- A. To allow for data redundancy
- B. To combine data from different tables
- C. To uniquely identify each record in a table**
- D. To enhance data security

The primary purpose of a primary key in a database is to uniquely identify each record in a table. A primary key ensures that no two rows in a table can have the same value for this key, which means that each record can be accessed, modified, and managed independently. This unique identification is crucial for maintaining data integrity and facilitating easy retrieval of data. By using a primary key, relationships between tables can also be established, allowing for efficient data management and retrieval. In relational database systems, primary keys play a vital role in defining how data can be joined between tables, thus enhancing the overall structure and organization of the database.

10. What characterizes a one-to-one binary relationship?

- A. A single occurrence of one entity type is associated with multiple occurrences of another entity type.
- B. Multiple occurrences of two different entity types are associated with each other.
- C. A single occurrence of one entity type can only be associated with a single occurrence of another entity type.**
- D. There are three different entity types involved in the relationship.

In a one-to-one binary relationship, each instance of one entity type is precisely associated with one instance of another entity type. This means that for every occurrence of the first entity, there is a corresponding single occurrence of the second entity. This strict association ensures that the relationship does not allow for duplicates or additional links; each entity can only reference one other entity, thereby creating a direct pairing between them. This concept is fundamental in database design and modeling, where it is essential to understand how entities interact with one another. In practical applications, this could represent a scenario like a user account and a profile; where each user has exactly one profile. The other options pertain to different types of relationships. For example, one describes a scenario where multiple occurrences of one entity can relate to multiple occurrences of another, indicating a many-to-many relationship, which does not fit the one-to-one criteria. Another mentions three different entities, which would suggest a more complex relationship type. Such distinctions help clarify the foundational aspects of data relationships essential for effective database management and design.

Next Steps

Congratulations on reaching the final section of this guide. You've taken a meaningful step toward passing your certification exam and advancing your career.

As you continue preparing, remember that consistent practice, review, and self-reflection are key to success. Make time to revisit difficult topics, simulate exam conditions, and track your progress along the way.

If you need help, have suggestions, or want to share feedback, we'd love to hear from you. Reach out to our team at hello@examzify.com.

Or visit your dedicated course page for more study tools and resources:

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We wish you the very best on your exam journey. You've got this!

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