Exam

Multiple Choice

1/1 point (graded)

You need to complete the following question to assess your completion of the course.
What is the definition of 1st Normal Form?

- ○ All columns must be dependant upon the primary key only
- ○ All columns must be dependant upon the whole key
- ○ All primary keys must be unique
- ◉ There should be no repeating columns ✔

Answer

Correct: 1st Normal Form states that you should have no repeating columns.

Submit You have used 1 of 1 attempt

✔ Correct (1/1 point)

Multiple Choice

1/1 point (graded)

You need to complete the following question to assess your completion of the course.
What is the definition of 2nd Normal Form?

- ○ All columns must be dependant upon the primary key only

- [x] All columns must be dependant upon the whole key
- [ ] All primary keys must be unique
- [ ] There should be no repeating columns

Answer
Correct:
2nd Normal Form states that all columns must be dependant upon the whole key.

Submit You have used 1 of 1 attempt

✔ Correct (1/1 point)

Multiple Choice

1/1 point (graded)
You need to complete the following question to assess your completion of the course.
What is the definition of 3rd Normal Form?

- [x] All columns must be dependant upon the primary key only
- [ ] All columns must be dependant upon the whole key
- [ ] All primary keys must be unique
- [ ] There should be no repeating columns

Answer
Correct:
3rd Normal Form states that all columns must be dependant upon the primary key only.

Submit You have used 1 of 1 attempt

✔ Correct (1/1 point)

Multiple Choice

1/1 point (graded)
You need to complete the following question to assess your completion of the course.
What level of normalization is typically expected when referring to a database as normalized?

- ○ 1st Normal Form
- ○ 2nd Normal Form
- ◉ 3rd Normal Form ✔
- ○ Boyce-Codd Normal Form
- ○ 4th Normal Form
- ○ 5th Normal Form

Answer
Correct:
3rd Normal Form is typically expected when referring to a database as normalized.

Submit You have used 1 of 1 attempt

✔ Correct (1/1 point)

Multiple Choice

1/1 point (graded)
You need to complete the following question to assess your completion of the course.
What is the advantage of denormalization?

- [x] It can speed up queries (although it typically slows down transactions)
- [ ] It can speed up transactions (although it typically slows down queries)
- [ ] It makes the database smaller
- [ ] It avoids the need to normalize the database
- [ ] It facilitates cloud migration of the database

Answer
Correct: It can speed up queries (although it typically slows down transactions).

Submit You have used 1 of 1 attempt

✔ Correct (1/1 point)

Multiple Choice

1/1 point (graded)

You need to complete the following question to assess your completion of the course. Why would you use the 32-bit int data type rather than the 16-bit small int?

- [ ] It will run faster on a 32-bit processor
- [ ] It will reduce storage space
- [x] It will store larger numbers
- [ ] It will store decimal places

Answer
Correct: It will store larger numbers.

Submit You have used 1 of 1 attempt

✔ Correct (1/1 point)

Multiple Choice

1/1 point (graded)

You need to complete the following question to assess your completion of the course.
What is the purpose of the uniqueidentifier data type?

- (●) uniqueidentifier stores globally unique IDs that make duplication across multiple systems extremely unlikely ✔
- ( ) uniqueidentifier automatically creates a primary key on the column
- ( ) uniqueidentifier automatically adds a unique costraint to the column
- ( ) uniqueidentifier stores IDs generated from a public cloud database that guarantees uniqueness

Answer
Correct:
uniqueidentifier stores globally unique IDs that make duplication across multiple systems extremely unlikely.

Submit You have used 1 of 1 attempt

✔ Correct (1/1 point)

Multiple Choice

1/1 point (graded)
You need to complete the following question to assess your completion of the course.
You want to convert data types using a function that returns NULL if there is an error.
Which function should you use?

- CAST
- TRY_FORMAT
- TRY_CAST ✔
- FORMAT

Answer
Correct: TRY_CAST is a function that returns NULL if there is an error.

Submit You have used 1 of 1 attempt

✔ Correct (1/1 point)

Multiple Choice

1/1 point (graded)
You need to complete the following question to assess your completion of the course.
What purpose do schemas perform?

- Schemas define the physical storage location
- Schemas define the table relationships
- Schemas list the object owner
- Schemas provide a security boundary ✔

Answer
Correct: Schemas provide a security boundary.

Submit You have used 1 of 1 attempt

✔ Correct (1/1 point)

Multiple Choice

1/1 point (graded)

You need to complete the following question to assess your completion of the course. What is the minimum number of parts for an object name recommended for consistent object name resolution?

- One
- Two ✔
- Three
- Four

Answer

Correct:

It is recommended that you use at least a two part name when referring to objects beccause there could be an object with the same name in another schema of the same database.

Submit You have used 1 of 1 attempt

✔ Correct (1/1 point)

Multiple Choice

1/1 point (graded)

You need to complete the following question to assess your completion of the course. What type of integrity does a primary key provide?

- Domain integrity

- [x] Entity integrity
- [ ] Referential integrity
- [ ] Transactional integrity

Answer
Correct: A primary key provides entity integrity.

Submit You have used 1 of 1 attempt

✔ Correct (1/1 point)

Multiple Choice

1/1 point (graded)
You need to complete the following question to assess your completion of the course.
What is the difference between a zero-length string and a NULL value?

- [ ] There is no difference
- [ ] You can search for a zero-length string, but you cannot search for a NULL value
- [ ] You can search for a NULL value, but you cannot search for a zero-length string
- [x] A zero-length string is known to be nothing, whereas a NULL value is unknown

Answer
Correct: A zero-length string is known to be nothing, whereas a NULL value is unknown.

Submit You have used 1 of 1 attempt

✔ Correct (1/1 point)

Multiple Choice

1/1 point (graded)

You need to complete the following question to assess your completion of the course. In your database every employee must report to one single other employee as their manager. What is the best way to enforce this?

- ○ Create a check constraint to verify that the manager exists within the same table
- ○ Create a Managers table and create a foreign key constraint to verify that the manager exists within this table
- ○ Create a table for each level within the company hierarchy and create foreign key constraints to verify that managers exist
- ● Create a foreign key constraint to verify that the manager exists within the same table ✔

Answer

Correct:

You should create a foreign key constraint to verify that the manager exists within the same table.

Submit You have used 1 of 1 attempt

✔ Correct (1/1 point)

Multiple Choice

1/1 point (graded)

You need to complete the following question to assess your completion of the course. What is the main purpose of sequences?

- ● They create incremental numbers that can be used by any table within a database ✔
- ○ They create incremental numbers that can be used by one table within a database

- They create globally unique identifiers for use with the uniqueidentifier data type that can be used by any table within a database
- They create globally unique identifiers for use with the uniqueidentifier data type that can be used by one table within a database
- They create incremental strings that can be used by one table within a database
- They create incremental strings that can be used by any table within a database

Answer
Correct:
Sequences create incremental numbers that can be used by any table within a database.

Submit You have used 1 of 1 attempt

✔ Correct (1/1 point)

Multiple Choice

1/1 point (graded)
You need to complete the following question to assess your completion of the course.
How do clustered indexes store data?

- All of the data is in the root level and intermediate levels. Only the index key is in the leaf level
- All of the data is in the root level. Only the index key is in the intermediate levels and the leaf level
- All of the data is in the leaf level and intermediate levels. Only the index key is in the root level
- All of the data is in the leaf level. Only the index key is in the intermediate levels and the root level ✔

Answer

Correct:
All of the data is in the leaf level. Only the index key is in the intermediate levels and the root level.

Submit You have used 1 of 1 attempt

✔ Correct (1/1 point)

Multiple Choice

1/1 point (graded)
You need to complete the following question to assess your completion of the course.
What is internal index fragmentation?

- (●) Index pages are not full ✔
- ( ) Index pages are corrupted
- ( ) Index pages do not point to the correct underlying data
- ( ) Index pages do not point to the correct leaf-level page

Answer
Correct:
Internal fragmentation occurs when index pages are not full. There is almost always some fragmentation.

Submit You have used 1 of 1 attempt

✔ Correct (1/1 point)

Multiple Choice

1/1 point (graded)
You need to complete the following question to assess your completion of the course.
What are the effects of indexing computed columns?

- It is not possible to index computed columns
- Performance is improved when updating source values of the computed column
- Performance is impaired when updating source values of the computed column ✔
- Indexed value need to be updated manually

Answer
Correct:
Performance is impaired when updating source values of the computed column, but values are updated automatically.

Submit You have used 1 of 1 attempt

✔ Correct (1/1 point)

Multiple Choice

1/1 point (graded)
You need to complete the following question to assess your completion of the course.
What is the purpose of composite indexes?

- They are smaller
- They are faster
- They might answer a query without going to underlying data and might be of use to multiple queries ✔
- They combine several indexes to group permissions and storage

Answer
Correct:
Composite indexes might answer a query without going to underlying data and might be of use to multiple queries.

Submit You have used 1 of 1 attempt

✔ Correct (1/1 point)

Multiple Choice

1/1 point (graded)
You need to complete the following question to assess your completion of the course.
What is the purpose of index statistics?

- ○ They allow you to see how well an index is performing
- ○ They show all of the indexes in a database
- ◉ They allow the optimizer to decide which indexes to use in a query ✔
- ○ They allow you to tune underlying data to improve query performance

Answer
Correct: Index statistics allow the optimizer to decide which indexes to use in a query.

Submit You have used 1 of 1 attempt

✔ Correct (1/1 point)

Multiple Choice

1/1 point (graded)
You need to complete the following question to assess your completion of the course.
When would you allow index statistics to be automatically created and updated?

- ○ Index statistics should only be automatically created and updated in very small databases.}}

- ○ Index statistics should only be automatically created and updated in very large databases.}}
- ◉ Index statistics should be automatically created and updated in almost all systems.}} ✔
- ○ Index statistics should only be automatically created and updated in Azure SQL Databases.}}

Submit You have used 1 of 1 attempt

✔ Correct (1/1 point)

Checkboxes

1/1 point (graded)

You need to complete the following question to assess your completion of the course. Which of the following should apply to transactions?

- ☑ Atomic
- ☐ Agnostic
- ☐ Compatible
- ☑ Consistent
- ☑ Isolated
- ☐ Independent
- ☑ Durable

- [ ] Divisible

✔

Submit You have used 1 of 1 attempt

✔ Correct (1/1 point)

Multiple Choice with Hints and Feedback

1/1 point (graded)

You need to complete the following question to assess your completion of the course. You need to avoid blocking or being blocked. Which transaction isolation level should you use?

- (•) READ UNCOMMITTED ✔
- ( ) READ COMMITTED
- ( ) REPEATABLE READ
- ( ) SERIALIZABLE

Answer
Correct: You should use READ UNCOMMITTED

Submit You have used 1 of 1 attempt

✔ Correct (1/1 point)

Multiple Choice with Hints and Feedback

1/1 point (graded)

You need to complete the following question to assess your completion of the course. You need to limit blocking or being blocked, but only see persistent data. Which transaction isolation level should you use?

- READ UNCOMMITTED
- READ COMMITTED ✔
- REPEATABLE READ
- SERIALIZABLE

Answer
Correct: You should use READ COMMITTED

Submit You have used 1 of 1 attempt

✔ Correct (1/1 point)

Multiple Choice with Hints and Feedback

1/1 point (graded)

You need to complete the following question to assess your completion of the course. You want to ensure that, if you read the values at the start and the end of the transaction, the values will be the same. ||Which transaction isolation level should you use?

- READ UNCOMMITTED
- READ COMMITTED
- REPEATABLE READ ✔
- SERIALIZABLE

Answer

Correct: You should use READ UNCOMMITTED

Submit You have used 1 of 1 attempt

✔ Correct (1/1 point)

Multiple Choice with Hints and Feedback

1/1 point (graded)

You need to complete the following question to assess your completion of the course. You need to prevent new records appearing between the start and end of your transaction. ||Which transaction isolation level should you use?

- READ UNCOMMITTED
- READ COMMITTED
- REPEATABLE READ
- SERIALIZABLE ✔

Answer
Correct: You should use SERIALIZABLE

Submit You have used 1 of 1 attempt

✔ Correct (1/1 point)

Multiple Choice with Hints and Feedback

1/1 point (graded)

You need to complete the following question to assess your completion of the course. With XACT_ABORT off, would a foreign key error cause the transaction to roll back?

- Yes
- No ✔

Submit You have used 1 of 1 attempt

✔ Correct (1/1 point)

Multiple Choice with Hints and Feedback

1/1 point (graded)

You need to complete the following question to assess your completion of the course. What is a deadlock?

- A transaction holds a block for so long that another transaction times out
- A query contains logic that means it cannot complete
- Two transactions are both blocking each other ✔
- Two different updates are attempted on exactly the same data at exactly the same time

Answer
Correct: Two transactions are both blocking each other

Submit You have used 1 of 1 attempt

✔ Correct (1/1 point)

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