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## CS5340 Databases – Fall 2025 ( Quiz # 1 )

Name: \_\_\_\_\_

Roll No: \_\_\_\_\_

### Instructions

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- 1- Read the Questions carefully to give concise Answers.
  - 2- Answers outside the box will not be considered. Answers required to be readable
  - 3- Clearly mention any assumptions you have taken in your Answers.
  - 4- Explanation is only optional for MCQs that are based on definitions.
  - 5- Use of unfair means will result in an award of ZERO marks.
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**Q1.** In the relational model, why is the order of rows and columns considered irrelevant?

- A. Because SQL Server automatically stores rows in sorted order
- B. Because relations are defined as sets, and sets have no ordering
- C. Because duplicate rows are not allowed
- D. Because schema always enforces column order

Explain your answer:

**Q2.** You define a column as Col1 CHAR(6) and insert 'CS340'. Why might a search for 'CS340' fail?

- A. CHAR stores padded spaces, so the value is actually 'CS340 '
- B. SQL Server automatically trims all CHAR values
- C. CHAR columns convert automatically to VARCHAR
- D. CHAR values are always case-sensitive

Explain your answer:

**Q3.** Which SQL Server column type is most appropriate for storing names in multiple languages (English, Arabic, Urdu)?

- A. NCHAR
- B. VARCHAR
- C. NVARCHAR
- D. TEXT

Explain your answer:

Q4. In a university database, Students(StudentID) is a primary key. Which situation violates the relational model?

- A. Two rows have the same StudentID with different names
- B. Rows are stored in different physical disk blocks
- C. Columns appear in a different order when queried
- D. A query result contains duplicates

Explain your answer:

Q5. A customer's age must always be  $\geq 18$ . Which constraint ensures this?

- A. PRIMARY KEY
- B. CHECK
- C. DEFAULT
- D. FOREIGN KEY

Explain your answer:

Q6. If you try to insert NULL into a primary key column in SQL Server, what happens?

- A. Insert succeeds because one NULL is allowed
- B. Insert fails cause primary keys cant be NULL
- C. Insert succeeds if UNIQUE is also applied
- D. Insert fails only if column is foreign key

Explain your answer:

Q7. How does a foreign key maintain referential integrity?

- A. By preventing duplicate rows in parent table
- B. By ensuring child values must exist in parent
- C. By automatically creating indexes
- D. By disallowing NULLs in child column

Explain your answer:

Q8. In SQL Server, what happens if no schema is specified when creating a table?

- A. Table cannot be created
- B. Table is placed in dbo schema
- C. Table is created in a temporary schema
- D. Table is assigned to msdb

Explain your answer:

Q9. Why might a company design multiple schemas such as hr.Employee and sales.Employee?

- A. To reduce database size
- B. To enforce automatic foreign keys
- C. To avoid naming conflicts and organize objects
- D. To compress table storage

Explain your answer:

Q10. Which SQL Server system database is recreated every time the server restarts and is used for temporary objects?

- A. master
- B. model
- C. msdb
- D. tempdb

Explain your answer:

Q11. Which category of SQL statements would you use to create tables and schemas?

- A. DML
- B. DDL
- C. DCL
- D. TCL

Explain your answer:

Q12. Which function safely tries to convert a string to an integer but returns NULL instead of error if conversion fails?

- A. CAST
- B. CONVERT
- C. TRY\_CAST
- D. PARSE

Explain your answer:

Q13. You want to return 'N/A' whenever the column DiscountCode is NULL. Which expression works?

- A. NULLIF(DiscountCode, 'N/A')
- B. COALESCE(DiscountCode, 'N/A')
- C. CAST(DiscountCode AS varchar)
- D. DiscountCode = 'N/A'

Explain your answer:

Q14. A query groups orders by CustomerID. To filter out groups with fewer than 5 orders, which clause is correct?

- A. WHERE COUNT(OrderID) > 5
- B. HAVING COUNT(OrderID) > 5
- C. GROUP BY COUNT(OrderID) > 5
- D. FILTER COUNT(OrderID) > 5

Explain your answer:

Q15. In a C# console app, why is the static void Main(string[] args) method required?

- A. It is used only for debugging
- B. It defines the program's entry point
- C. It initializes global variables
- D. It compiles external libraries

Explain your answer:

**END OF QUIZ**

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