DBMS Programming Questions Part II

Q.1 Explain different types of index.
Answer : There are three types of index namely:

Unique Index:
This index does not allow the field to have duplicate values if the column is unique indexed. If a primary key is defined, a unique index can be applied automatically.

Clustered Index:
This index reorders the physical order of the table and searches based on the basis of key values. Each table can only have one clustered index.

Non-Clustered Index:
Non-Clustered Index does not alter the physical order of the table and maintains a logical order of the data. Each table can have many nonclustered indexes.

Q2 What is the difference between DROP and TRUNCATE commands?
DROP command removes a table and it cannot be rolled back from the database whereas TRUNCATE command removes all the rows from the table.

Q.3 List the ways to get the count of records in a table?
To count the number of records in a table, you can use the below commands:

SELECT * FROM table1

SELECT COUNT(*) FROM table1

SELECT rows FROM sysindexes WHERE id = OBJECT_ID(table1) AND indid < 2

Q.4 What do you mean by "Trigger" in SQL?
Trigger in SQL is are a special type of stored procedures that are defined to execute automatically in place or after data modifications. It allows you to execute a batch of code when an insert, update or any other query is executed against a specific table.

Q.5 What do you mean by Collation?
Collation is defined as a set of rules that determine how data can be sorted as well as compared. Character data is sorted using the rules that define the correct character sequence along with options for specifying case-sensitivity, character width etc.

Q6. What is the difference between cross join and natural join?

The cross join produces the cross product or Cartesian product of two tables whereas the natural join is based on all the columns having the same name and data types in both the tables.

Q7. How can you fetch alternate records from a table?

You can fetch alternate records i.e both odd and even row numbers.
For example- To display even numbers, use the following command:
Select studentId from (Select rowno, studentId from student) where mod(rowno,2)=0

Now, to display odd numbers:

Select studentId from (Select rowno, studentId from student) where mod(rowno,2)=1

Q8   What is Auto Increment in SQL?

Auto increment keyword allows the user to create a unique number to get generated whenever a new record is inserted into the table. This keyword is usually required whenever PRIMARY KEY is used.

AUTO INCREMENT keyword can be used in Oracle and IDENTITY keyword can be used in SQL SERVER.

Q9 . Write a SQL query to display the current date?

In SQL, there is a built-in function called GetDate() which helps to return the current timestamp/date.

Q10. What is the main difference between 'BETWEEN' and 'IN' condition operators?

BETWEEN operator is used to display rows based on a range of values in a row whereas the IN condition operator is used to check for values contained in a specific set of values.

Example of BETWEEN:
SELECT * FROM Students where ROLL_NO BETWEEN 10 AND 50;

Example of IN:
SELECT * FROM students where ROLL_NO IN (8,15,25);