**SQL THEORETICAL QUESTIONS AND ANSWERS**

**Name three types of join used in SQL and describe briefly how it works?**

**1.** Three types of join used in SQL are inner join, outer join and cross join. An inner join is used to combine records from two tables based on a common field between them. An outer join combines records from two tables and can include records that don't have the same field value. A cross join creates a cartesian product of the two tables, combining each row in the first table with each row in the second table.

**What is the difference between a NULL value, a 0 value and a blank value in**

**SQL?**

**2**. A NULL value is a value that doesn't exist. A 0 value is a value that exists but is set to 0. A blank value is a value that exists but is empty.

**What is the difference between HAVING and WHERE**

**3.** The WHERE clause is used to filter records based on a certain condition and can only be used with SELECT, UPDATE, and DELETE statements. The HAVING clause is used to filter records after the results have been grouped and can only be used with SELECT statements.

**How do you sort data in SQL**

**4.** To sort data in SQL, you can use the ORDER BY clause. This clause allows you to specify the column or columns by which you want to sort the data.

**What is the difference between a table, a view and a stored procedure**

**5.** A table is a collection of records stored in the database. A view is a virtual table created using the results of a query. A stored procedure is a set of SQL statements that can be executed as a single unit.

**What would you use to loop through records in a SQL statement?**

**6.** To loop through records in a SQL statement, you can use a cursor. A cursor is a control structure that allows you to traverse through and process each row in a result set.

**How would you define a decimal versus a whole number in SQL?**

**7.** To define a decimal versus a whole number in SQL, you can use the DECIMAL data type. This data type allows you to store numbers with a decimal point.

**What is a stored procedure?**

**8**. A stored procedure is a set of SQL statements that can be executed as a single unit. It is used to perform complex tasks and can be called from other programs.

**What is Auto Increment?**

**9.** Auto Increment is a feature in SQL which allows a column value to be automatically incremented each time a new row is inserted into the table.

**How to select unique records from a table?**

**10.** To select unique records from a table, you can use the SELECT DISTINCT clause. This clause will return only the unique records from the table.

**What notation would you use to query elements stored in a JSON object?**

**11**. To query elements stored in a JSON object, you can use the dot notation. This notation allows you to access the elements of a JSON object by specifying the path to the element.

**Which operator is used in query for pattern matching?**

**12**. The LIKE operator is used in query for pattern matching. This operator allows you to search for records that match a certain pattern or string.