String Functions

1)The ASCII() function returns the ASCII value for the specific character

SELECT ASCII(CustomerName) AS NumCodeOfFirstChar  
FROM Customers;

2) The CHAR() function returns the character based on the ASCII code

SELECT CHAR(65) AS CodeToCharacter;

3) The CHARINDEX() function searches for a substring in a string, and returns the position.

If the substring is not found, this function returns 0.

**Note:** This function performs a case-insensitive search.

SELECT CHARINDEX('OM', 'Customer') AS MatchPosition;

SELECT CHARINDEX('mer', 'Customer', 3) AS MatchPosition;

4) The CONCAT() function adds two or more strings together

CONCAT(string1, string2, ...., string\_n)

SELECT CONCAT('SQL', ' is', ' fun!');

SELECT CONCAT('SQL', ' ', 'is', ' ', 'fun!');

The + operator allows you to add two or more strings together.

SELECT 'SQL' + ' is' + ' fun!';

5) The CONCAT\_WS() function adds two or more strings together with a separator.

SELECT CONCAT\_WS('-', 'SQL', ' is', ' fun!');

6) The DATALENGTH() function returns the number of bytes used to represent an expression

SELECT DATALENGTH('rgukt.ac.in');

7) The LEN() function returns the length of a string.

SELECT LEN('2017-08');

8) The REVERSE() function reverses a string and returns the result

SELECT REVERSE(CustomerName)  
FROM Customers;

9) The STR() function returns a number as a string

SELECT STR(185);

10) The SUBSTRING() function extracts some characters from a string

SELECT SUBSTRING(CustomerName, 1, 5) AS ExtractString  
FROM Customers;

11) The TRANSLATE() function returns the string from the first argument after the characters specified in the second argument are translated into the characters specified in the third argument.

SELECT TRANSLATE('3\*[2+1]/{8-4}', '[]{}', '()()'); // Results in 3\*(2+1)/(8-4)

Numeric Functions

1)The ABS() function returns the absolute value of a number

ABS(number)

2) The AVG() function returns the average value of an expression.

SELECT AVG(Price) FROM Products;

3) The CEILING() function returns the smallest integer value that is larger than or equal to a number.

SELECT CEILING(25.75) AS CeilValue;

4) The COUNT() function returns the number of records returned by a select query.

SELECT COUNT(ProductID) AS NumberOfProducts FROM Products;

5) The DEGREES() function converts a value in radians to degrees

SELECT DEGREES(1.5);

6) The FLOOR() function returns the largest integer value that is smaller than or equal to a number.

SELECT FLOOR(25.6) AS FloorValue;

7) The MAX() function returns the maximum value in a set of values.

SELECT MAX(Price) AS LargestPrice FROM Products;

8) The MIN() function returns the minimum value in a set of values

SELECT MIN(Price) AS SmallestPrice FROM Products;

9) The POWER() function returns the value of a number raised to the power of another number

SELECT POWER(8, 3);

10) The RAND() function returns a random number between 0 (inclusive) and 1 (exclusive)

Return a random decimal number>=5 and <10

SELECT RAND()\*(10-5)+5;

11) The ROUND() function rounds a number to a specified number of decimal places.

Round the number to 2 decimal places, and also use the operation parameter

SELECT ROUND(235.415, 2, 1) AS RoundValue;

12) The SIGN() function returns the sign of a number.

This function will return one of the following:

* If number > 0, it returns 1
* If number = 0, it returns 0
* If number < 0, it returns -1

SELECT SIGN(255.5);

13) The SQRT() function returns the square root of a number

SELECT SQRT(25);

14) The SQUARE() function returns the square of a number.

SELECT SQUARE(64);

15) The SUM() function calculates the sum of a set of values.

**Note:** NULL values are ignored

SELECT SUM(Quantity) AS TotalItemsOrdered FROM OrderDetails;

Date Functions

1) The DATEADD() function adds a time/date interval to a date and then returns the date.

SELECT DATEADD(year, 1, '2017/08/25') AS DateAdd;

DATEADD(interval, number, date)

2) The DATEDIFF() function returns the difference between two dates.

SELECT DATEDIFF(month, '2017/08/25', '2011/08/25') AS DateDiff;

SELECT DATEDIFF(hour, '2017/08/25 07:00', '2017/08/25 12:45') AS DateDiff;

3)The DATEFROMPARTS() function returns a date from the specified parts (year, month, and day values).

DATEFROMPARTS(year, month, day)

SELECT DATEFROMPARTS(2018, 10, 31) AS DateFromParts;

4) The DATENAME() function returns a specified part of a date.

This function returns the result as a string value.

SELECT DATENAME(year, '2017/08/25') AS DatePartString;

5) The DATEPART() function returns a specified part of a date.

This function returns the result as an integer value

SELECT DATEPART(year, '2017/08/25') AS DatePartInt;

SELECT DATEPART(month, '2017/08/25') AS DatePartInt;

6) The DAY() function returns the day of the month (from 1 to 31) for a specified date.

SELECT DAY('2017/08/13 09:08') AS DayOfMonth;

SELECT DAY('2017/08/25') AS DayOfMonth;

7) The GETDATE() function returns the current database system date and time, in a 'YYYY-MM-DD hh:mm:ss.mmm' format

SELECT GETDATE();

8) The ISDATE() function checks an expression and returns 1 if it is a valid date, otherwise 0.

SELECT ISDATE('2017');

SELECT ISDATE('Hello world!');

9) The MONTH() function returns the month part for a specified date (a number from 1 to 12)

SELECT MONTH('2017/08/25') AS Month;

10) The SYSDATETIME() function returns the date and time of the computer where the SQL Server is running

SELECT SYSDATETIME() AS SysDateTime;

11) The YEAR() function returns the year part for a specified date

SELECT YEAR('2017/08/25') AS Year;

SELECT YEAR('1998/05/25 09:08') AS Year;