**SQL Functions:-** SQL has many built-in functions for performing calculations on data.

**Types of SQL Functions :-**

According to the SQL Data Type,sql functions are as follows:-

Numeric Functions :- To processing Number Data type

String Functions :- To Processing on String Data type

Date Functions :- To processing on Date Data Type

**Numeric Functions**

**AVG Function :-** Returns Average of all Row Values for particular Column.Null Values are ignored in Calculation.

**Syntax :-** AVG ([DISTINCT ALL ]column\_name) ;

**Example :-** SELECT AVG(BALANCE) “AVERAGE \_BALANCE”FROM ACCOUNT\_MASTER;

**MIN Function :-** Return a minimum Value of Expression

**Syntax :-** MIN ([DISTINCT | ALL] column\_name) ;

**Example :-** SELECT MIN(BALANCE) “Minimum\_Balance”FROM ACCOUNT;

**ABS Function :-** Absolute Value Expression returned by this function

**Syntax :-** ABS(n);

**Example :-** Select ABS(-10) From dual;

**Output :-** 10

**POWER Function :-** Returns Power of the Expression.

**Syntax :-** POWER(m,n);

**Example :-** Select Power(6,2) “Power” From dual;

**Output :-** 36

**ROUND Function :-** Used to Get Rounded Value of Expression

**Syntax :-** ROUND (n,m);

n = Numeric Value with Decimal Point,m = Rounded Position

**Example :-** Select Round(10.29,1) “Rounded\_Value” From dual;

**Output: :-** 10.3

**SQRT Function :-** Used to Find out the Square Root of Expression.

**Syntax :-** SQRT (n);

Returns Square root of n,n must be Positive if n < 0 then Null will be returned

**Example :-** Select Sqrt(25) “Square\_Value” From dual;

**Output :-** 5

**Exponent Function :-** Returns e raised to nth Power.

**Syntax :-** EXP (n);

**Example :-** Select exp(5) “Exponent” From dual;

**Output :-** 148.413159 ( e = 2.71828183 )

**GREATEST Function :-** Used to Find out the Greatest Valued from the Expression.

**Syntax :-** GREATEST (exp1,exp2,...,expn);

**Example :-** Select Greatest(21,10,30) “Great\_Value” From dual;

**Output :-** 30

**LEAST Function :-** Used to Find out Lowest Value from the Expression

**Syntax :-** LEAST (exp1,exp2,...,expn);

**Example :-** Select Least(35,75,25) “Least\_Value” From dual;

**Output :-** 25

**MOD Function :-** Used to Find out the Reminder of Division Function

**Syntax :-** MOD (m,n);

m/n Reminder is a result

**Example :-** Select Mod(18,7) “Reminder” From dual;

**Truncation Function :-** Returns Truncated Values after the decimal position

**Syntax :-** TRUNC (number, decimal\_Places);

**Example :-** Select Trunc(17.235,1) “Truncated\_Value” From dual;

**Output :-** 17.2

**Floor Function :-** Returns Largest Integer Value of Expression.

**Syntax :-** FLOOR (n)

**Example :-** Select Floor(24.18) “Large\_Int” From dual;

**Output :-** 24

**Character Function**

**ASCII Function :-** Returns Asciivalue of Specified Character.

**Syntax :-** ASCII (Char) ;

**Example :-** Select ASCII(‘a’) “Ascii\_Value” From dual;

**Output :-** Ascii\_Value97

**INSTR Function :-** Return location of substring in the main string.

**Syntax :-** INSTR (string1, string2, start\_position, nth\_appearance)

String1-Main String

String2 –sub string which is find out from main string

Start\_postion–position in string1 where the search will start

Nth appearance –is the nth appearance of string

**Example :-** Select Instr(‘SCT on the net’,’t’) “Instr”fromdual;

**Output :-** Instr8

**LENGTH Function :-** Returns the length of words in the string

**Syntax :-** LENGTH (word) ;

**Example :-** Select Length(‘xyz’) “Length” From dual;

**Output :-** Length3

**LTRIM Function :-** Remove Character from left of String.

**Syntax :-** LTRIM (char, set);

**Example :-** Select Ltrim(‘xyz’,’x’) “Ltrim” From dual;

**Output :-** Ltrimyz

**RTRIM Function :-** Remove character from Right of String.

**Syntax :-** RTRIM (char, set);

**Example :-** Select Rtrim(‘xyz’,’z’) “Rtrim” From dual;

**Output :-** Rtrimxy

**LPAD Function :-** Return String of with specified Character at left side of string.

**Syntax :-** LPAD (char1, n,[char2]);

**Example :-** Select Lpad(‘xyz’ , 5 , ‘\*’) “Lpad” From dual;

**Output :-** Lpad\*\*xyz

**RPAD Function :-** Add specified character to the right side of main string

**Syntax :-** RPAD (char1, n, [char2]);

**Example :-** Select Rpad(‘xyz’,6, ‘p’) “Rpad” From dual;

**Output :-** Rpadxyzppp

**VSIZE Function :-** Return the number of bytes occupied by the expression

**Syntax :-** VSIZE ( expression );

**Example :-** Select Vsize(‘abcXYZ’) “Byte” From dual;

**Output :-** Byte7

**Date Function**

**ADD\_MONTHS :-** Return date after adding the number of the months specified in the function.

**Syntax** :- ADD\_MONTHS (d,n);

**Example** :- Select Add\_Months(Sysdate,4)”Add\_Month” from dual;

**Output** :- Add\_Month27-JAN-09

**LAST\_DAY :-** Return last date of month which is specified in the Function.

**Syntax :-** LAST\_DAY (d) ;

**Example :-** Select SYSDATE, LAST\_DAY(Sysdate)”Last\_Date” from dual;

**Output :-** SysdateLast\_Date29-sep-08 30-sep-08

**MONTHS\_BETWEEN :-** Returns number of months between two date which is specified in the function

**Syntax :-** MONTHS\_BETWEEN( d1 , d2 )

**Example :-** Select Months\_Between(‘02-feb-08,’02-jan-08’) “Months” from dual;

**Output :-** Months1

**NEXT\_DAY :-** Returns the date of the first weekday named by char that is after the date named by date.

**Syntax :-** NEXT\_DAY ( date, char)

**Example :-** Select NEXT\_DAY (‘06-JULY-02’,’Saturday’) “Next\_Day” from dual;

**Output :-** Next\_Day13-july-02

**TO\_DATE() :-** TO\_DATE convert a char value in to date value.

**Syntax :-** TO\_DATE(<char value>[<fmt>])

**Example :-** select TO\_DATE(‘09/06/83’,’DD/MM/YY) from dual;

**Output :-** 09-june-83