

### 10.3.3 Character functions

To manipulate character in C++ a header file called ctype.h must be included.

a) isupper( )- To check whether a character is in uppercase or not. If the character is in uppercase it returns a value 1 otherwise it returns 0.

Syntax : isupper(char ch);

b) islower( )- To check whether a character is in lowercase or not. If the character is in lowercase it returns a value 1 otherwise it returns 0.

Syntax : islower(char ch);

c) isalpha( ) - To check whether a character is an alphabet or not. If the character is an alphabet it returns a value 1 otherwise it returns 0.

Syntax : isalpha(char ch);

d) isdigit()- To check whether a character is a digit or not. If the character is a digit it returns a value 1 otherwise it returns 0.

Syntax : isdigit(char ch);

e) isalnum( ) - To check whether a character is an alphanumeric or not. If the character is an alphanumeric it returns a value 1 otherwise it returns 0.

Syntax: isalnum(char ch);

f) toupper( )- It is used to convert the given character into uppercase.

Syntax : toupper(char ch);

g) tolower( )- It is used to convert the given character into lowercase.

Syntax : tolower(char ch);

**10.3.4 Conversion functions :** Some occasions we have to convert a data type into another for this conversion functions used. The heade file stdlib.h must be included.

a) itoa()- It is used to convert an integer value to string type.

Syntax : itoa(int v,char str,int size); This function has 3 arguments, first one is the integer to be converted, second is the string variable to store and third is the size of the string.

Eg. itoa("123",str,4);

cout<<str;

b) atoi()- It is the opposite of itoa( ). That is it converts a string into integer.

Syntax : atoi(str);

### 10.3.5 I / O Manipulating function

It is used to manipulate I / O operations in C++. The header file `iomanip.h` must be included.

a) `setw( )` – It is used to set the width for the subsequent string.

Syntax : `setw(size);`