LECTURE NO. 1

PREVIEW OF TODAY'S TOPICS

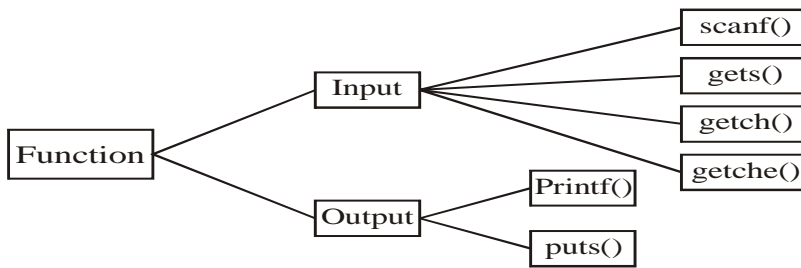☞ **Input / Output Functions**

INPUT / OUTPUT FUNCTIONS

LONG QUESTION

1.   **Explain the printf function with an example.**   **(GRW 2019)**

SHORT QUESTIONS

1.   **What is printf function and also write its syntax?**   **(LHR 2022) (DKG 2021) (K.B)**
2.   **What is standard input?**   **(FSD 2021) (U.B)**
3.   **Write the names of input functions in C language.**   **(DKG 2021)(K.B)**
4.   **Write a note standard output.**   **(U.B)**
5.   **Write the note on format string of a printf function.**   **(U.B)**
6.   **Write a single printf statement to display the following text: C:\My documents(GRW 2019)(A.B)**
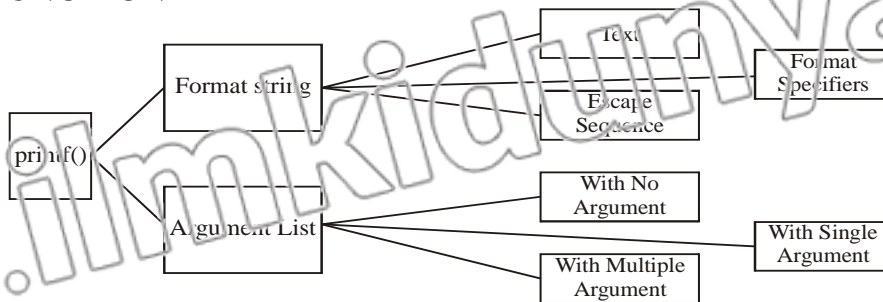

INPUT:

- The process of giving something to the computer is called **input.**
- The mostly input is given by the keyboard.
- The **standard input** is the input that is given by the standard input device keyboard.
- A program may need certain inputs from the user to execute.
- Following are some input functions in C language.
  {scanf(), gets(), getch(), getche()}

OUTPUT:

- The process of getting something from the computer is known as **Output.**
- The mostly output is display on monitor/ Display screen.
- The **standard output** is the output that is display on the screen.
- A program may need certain output function to show results.
- Following are some output function in C language.
  {printf(), puts()}

PRINTF() FUNCTION

PRINTF();

- The printf() function is used to print output of the program on the monitor screen.
- The printf function can display text, constant and values of the variables in specific format.
- The printf is pronounced as print-eff.

Syntax without argument list:

  printf("Format String");

Syntax with argument list:

  printf("Format String", argument_list);

FORMAT STRING

- Format string is given in double quotes and also known as **control string.**
- Following are the parts of format string.
- **Text:**   Any message to display on the screen.

- **Format specifiers:** Specify how the values of variables will be displayed.
- **Escape sequences:** Specify the format of the output.

ARGUMENT_LIST
- The argument list consists of constants, variables or expression whose values are to be printed on the screen.
- Each argument in the list should be separated by comma.
- The value of argument display according to the specifier.
- The argument list is **optional part** of function.
- **With no argument.**

    printf("HELLO 2ⁿᵈ YEAR");

    printf("Enter Your Name");
- **With single argument.**

    printf("Your marks are %d",**m);**

    printf("Your name is %s", **name);**
- **With multiple arguments.**

    printf("Your marks are %d and grade is %C.", **m, g);**

    printf("Your pay is %d and bonus is %d.", **pay, bonus);**

MULTIPLE CHOICE QUESTIONS

1. **Printf(_) is a:**   **(MTN 2021)**
   (A) local function   (B) user defined function
   (C) keyword   (D) built-in function

2. **Which function is used to display output on screen in C- Language?**   **(GRW 2018)**
   (a) scanf ( )   (b) printf ( )
   (c) gets ( )   (d) print

3. **Which of the following is used to output data in the program?**   **(RWP 2018,2022)**
   (a) printf()   **(b) scanf**()
   (c) clrscr()   (d) putc()

4. **The number of variable can be used in printf function.**   **(RWP 2018)**
   (a) One   (b) Two
   (c) Three   **(d) Many**

5. **The function printf() and scanf() can be accessed by including library.**
   (a) conio.h   **(b) stdio.h**
   (c) math.h   (d) string.h

6. **Which is not the input function in C language?**
   (a) getche()   **(b) getc()**
   (c) getch()   (d) gets()

SHORT QUESTIONS

1. **What is printf function and also write its syntax?**   **(LHR 2022) (DKG 2021) (K.B)**

Ans: The printf function is used to print the output of the program in specified format. It takes arguments a format string and an optional list of variables. The values of variables are displayed according to format specifier in the format string. The printf function can be access in a program by including stdio.h header file.

Syntax:

printf(format string);

printf(format string, var1, var2, var3,......);

The format string is a character string and variables are optional .

2. **What is standard input?**   **(FSD 2021) (U.B)**

Ans: A input which is given by the keyboard is called standard input.

Or

The **standard input** is the input that is given by the standard input device keyboard.

Write the names of input functions in C language.   **(DKG 2021)(K.B)**

Ans: Following are some input functions in C language.
- **scanf(),**

- **gets(),**
- **getch(),**
- **getche()**

3. **Write a note standard output.** (U.B)

Ans: The **standard output** is the output that is display on the screen.

4. **Write the note on format string of a printf function.** (U.B)

Ans: Format string is given in double quotes and also known as **control string.**
Following are the parts of format string.

Text: Any message to display on the screen.
Format specifiers: Specify how the values of variables will be displayed.
Escape sequences: Specify the format of the output.

5. **Write a single printf statement to display the following text: C:\My documents** (GRW 2019)(A.B)

Ans: **printf("C:\My documents");**

LECTURE NO. 2

PREVIEW OF TODAY'S TOPICS

☞ **Format Specifier**

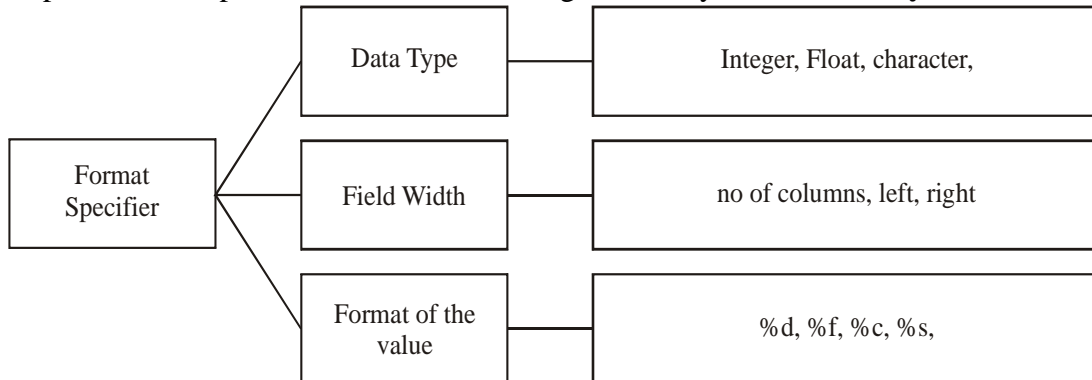### FORMAT SPECIFIER
LONG QUESTION

1. **What is format specifier? Explain different format specifier used in C language.**

SHORT QUESTIONS

1. **List four format specifier used in C language?**   **(SWL 2021) (DGK 2021) (U.B)**
2. **What is format specifier?**   **(SWL 2022) (BWP 2022) (RWP 2022) (SGD 2018) (K.B)**
3. **Write C statement output two values in two floating point variables a & b.**   **(A.B)**
4. **Write down the purpose of %c &%e format specifier.**   **(SWL 2019)(A.B)**

Format specifier specify the format according to which the value of a variable should be read and display on the screen.

Format specifiers are specified in the format string and always start with **%symbol.**

For different types of variables, different types of format specifiers are used.
A list of different format specifiers is given below:

Symbol	Data type
%d	int, short
%f	Float
%lf	Double
%e	float, double (Exponential Notation)
%g	floating point(%f or %d whichever is shorter
%c	char
%s	char string
%u	unsigned short, signed int
%x	unsigned hexadecimal integers
%o	unsigned octal integer
%i	integers
%ld	long integer

MULTIPLE CHOICE QUESTIONS

1. **Format specified is started with the symbol:**   **(FSD 2022) (BWP 2021)**

   (a) ?   **(b) %**

   (c) \   (d) *

2. **Which of the following format specifier is used for float data type?**   **(DGK 2021)**

   (a) %f   (b) %d

   (c) %8   (d) %c

3. **The format specifier %c is used for.**   **(MTN 2021) (SGD 2018)**

(a) String　　　　　　　　　　　　　　　(b) Integer

(c) Character　　　　　　　　　　　　　(d) Char

4. **The format specifier used for string data type is:**

(a) %s　　　　　　　　　　　　　　　(b) %c

(c) %d　　　　　　　　　　　　　　　(d) %f

5. **Which of the following things are determined by format specifier?**

(a) Data Type　　　　　　　　　　　　**(b)** Field Width

(c) Format of the Value　　　　　　　　**(d) All of these**

SHORT QUESTIONS

1. **List four format specifier used in C language?**　　　**(SWL 2021) (DGK 2021) (U.B)**

Ans: Following are the symbol for format specifier.

Symbol	Data type
%d	int, short
%f	Float
%lf	Double
%e	float, double (Exponential Notation)

2. **What is format specifier?**　　　**(SWL 2022) (BWP 2022) (RWP 2022) (SGD 2018) (K.B)**

Ans: Format Specifier

Format specifier specify the format in which the value of a variable should be display on the screen. Format specifiers are specified in the format string and always start with % symbol.

For example:

Format specifier of int data type is %d and float data type is %f

3. **Write C- statement output two values in two floating point variables a and b.**　　　**(A.B)**

Ans: printf("%f %f", a, b);

4. **Write down the purpose of %c &%e format specifier.**　　　**(SWL 2019)(A.B)**

Ans: Following are the purpose is

%c format specifier is used to print character data type.

%e format specifier is used to print float and double data type with exponential notation

LECTURE NO. 3

PREVIEW OF TODAY'S TOPICS

☞   **Field Width Specifier**

FIELD WIDTH SPECIFIER
LONG QUESTION

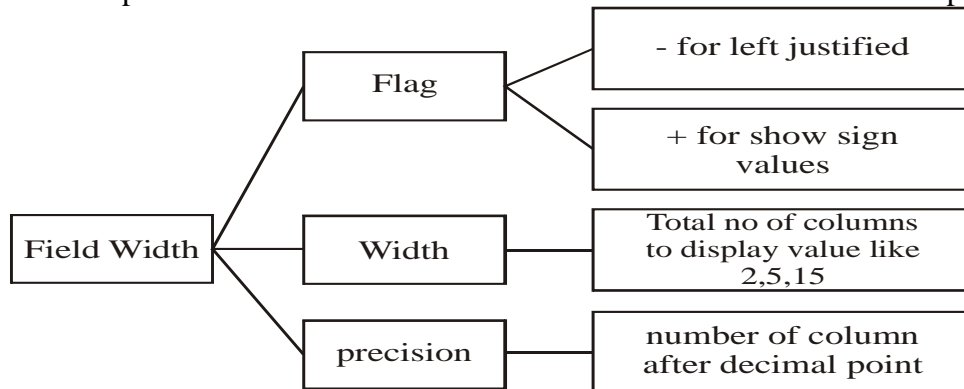1.   **Write a detailed note on field width specifier**

SHORT QUESTIONS

1.   **What is meant by field width specifier?**   **(FSD 2021)(K.B)**
2.   **How can you specify the field width specifier of integer?**   **(U.B)**
3.   **How can you specify the field width for floating point number?**   **(U.B)**
4.   **Give some examples of field width for floating point number:**   **(U.B)**

FIELD WIDTH SPECIFIER:

The number of columns used to display a value on screen is referred to as field width. A field width specifier describes the number of columns that should be used to print a value.

FIELD WIDTH FOR INTEGER:

To specify the field width of a integer value just add a number between % and d of the %d format specifier in the printf format string. This number specifies the field width.

For example

        printf("Area = %4d ", area);

The above statement indicates that four columns will be used to display the value of area. Suppose the value of area is 45. Two extra spaces will be added before the 45 on the screen to complete the length of 45.

The output of the above statement as follows

        Area=□□45

The symbol □ represent a blank space. The two digits are printed right justified preceded by two blank spaces.

The following table show how integer values are displayed using different format specifiers

Value	Format specifier	Displayed output
786	%4d	□786
786	%1d	786
786	%6d	□□786
-786	%2d	-786

FIELD WIDTH FOR FLOATING POINT NUMBER:

i.   The format specification of floating point number we must specify both the total field width and the number of decimal places.

ii.   The total field width should be large enough to accommodate all digits before and after the decimal point. A zero is also printed before decimal point for a number that is smaller than zero. Total field width should include a space for the decimal point and for minus sign if the number is negative.

iii.   The general form for the format specifier for a floating point value will be %m.nf where m represents the total field width and n represents the desired number of decimal places.

The following table show how floating values are displayed using different format specifiers:

Value	Format Specified	Displayed Output
3.14159	%5.2f	□3.14
.6789	%4.2	0.69

| -0.007 | %4.2f | -0.01 |
| 3.14159 | %5.1f | □□3.1 |

MULTIPLE CHOICE QUESTIONS

1. **The number of columns used to display a value on screen is referred.** **(BWP 2021)**
    (a) Escape sequence   (b) Array
    (c) Structure   **(d) Field-width**

2. **If float** $a = .6789$ **and format specifier is %4.2f the output will be.**
    (a) 0.67   (b) .67
    (c) 78   **(d) 0.68**

3. **The general form of field width specifier (format specifier) for a floating point value is.**
    (a) %m.nf   **(b) m.n**
    (c) %f m.n   **(d)** %d

SHORT QUESTIONS

1. **What is meant by field width specifier?** **(FSD 2021)(K.B)**
Ans: The number of columns used to display a value on screen is referred to as field width. A field width specifier describes the number of columns that should be used to print a value.

2. **How can you specify the field width specifier of integer?**
Ans: To specify the field width of an integer value just add a number between % and d of the %d format specifier in the printf format string. This number specifies the field width.
    For example
        printf("Area = %4d", area);
        Output: Area =   □45

3. **How can you specify the field width for floating point number?** **(U.B)**
Ans: The format specification of floating point number we must specify both the total field width and the number of decimal places.
    The general form for the format specifier for a floating point value will be %m.nf where m represents the total field width and n represents the desired number of decimal places.

4. **Give some examples of field width for floating point number:** **(U.B)**
Ans: The following table show how floating values are displayed using different format specifiers:

Value	Format Specifier	Displayed Output
3.14159	%5.2f	□3.14
.6789	%4.2	0.69
-0.007	%4.2f	-0.01
3.14159	%5.1f	□□3.1

LECTURE NO. 4

PREVIEW OF TODAY'S TOPICS

☞   **Escape Sequence**

ESCAPE SEQUENCE
LONG QUESTION

1.   **What is scape sequence? Explain any five with examples.**

SHORT QUESTIONS

1.   **What is Escape sequence?**   **(SWL 2021) (BWP 2021) (K.B)**
2.   **Write down the name of four escape sequences.**   **(BWP 2022) (MTN 2021)(U.B)**
3.   **Write a program that display the following output using escape sequences characters.**   **(A.B)**

(i)   The escape sequences are special characters used in format string of printf function in combination with **backslash (\).**

(ii)   The backslash is called **escape character;** it causes an escape from the normal interpretation of a string so that the next character is recognized as having a special meaning.

Escape sequence	Purpose
\n	New line
\t	Tab
\b	Back space
\r	Carriage Return (Enter Key)
\f	Form feed
\'	Single Quote
\"	Double Quote
\\	Backslash
\xdd	ASCII code in hexadecimal notation (each digit represent a digit)
\ddd	ASCII code in octal notation (each d represents a digit)

1.   **\b: Backspace**

This escape sequence is used to insert backspace in the output.

   printf("Hello \b World");

Output:

   HellWorld

2.   **\f: formfeed**

This escape sequence is used to insert blank paper in the output.

For example:

   printf("Hello \f World");

Output:

   HelloWorld

3.   **\n: newline**

This escape sequence is used to insert new line in the output.

For example:

   printf("Hello\n World");

Output:

   Hello
   World

4.   **\r: carraigereturn**

This escape sequence is used to move cursor to the beginning of the line in the output.

For example:

   printf("Hello \r World");

Output:

World

5.   **\t: Tab**

This escape sequence is used to insert Tab in the output.

For example:

printf("Hello \t World");

Output:

Hello   world

MULTIPLE CHOICE QUESTIONS

1.   **The Escape Sequence for backslash is:**   (LHR 2021) (RWP 2019)

(a) \   (b) \ b

(c) \\   (d) \ t

2.   **The escape sequence for new line:**   (MTN 2021) (FSD 2021)

Or

Which escape sequence moves the cursor at the beginning of current line?

(a) \n   (b) \t

(c) \b   (d) \f

3.   **The escape sequence used to represent the carriage return.**

(a) \a   (b) \t

(c) \n   (d) \r

4.   **Escape sequence always begins with a:**   (SGD 2019)

Or

Which character signifies the beginning of an escape sequence?

(a) /   (b) \

(c) %   (d) f

5.   **The escape sequence which represents the horizontal tab?**   (DGK 2021)

(a) \a   (b) \t

(c) \n   (d) \r

6.   **The escape sequence which represents the back space?**   (GRW 2021)

OR

Which escape sequence is used to erase a character left to the cursor position?   (SWL 2021)

(a) \b   (b) \t

(c) \n   (d) \r

SHORT QUESTIONS

1.   **What is Escape sequence?**   (SWL 2021) (RWP 2021) (K.B)

Ans: The escape sequences are special characters used in format string of printf function in combination with backslash (\). The backslash is called escape character, it causes an escape from the normal interpretation of a string so that the next character is recognized as having a special meaning.

2.   **Write the name of Escape sequence? (Any Four).**   (BWP 2022) (MTN 2021)(U.B)

Ans: Following are the name and purpose of escape sequence.

Escape sequence	Purpose
\n	New line
\t	Tab
\b	Back space
\r	Carriage Return (Enter Key)
\f	Form feed

3.   **Write a program that display the following output using escape sequences characters.**

Roll no	Name	Marks

10	Asim	56
11	Abid	95

Ans: Output:

#include<stdio.h>

#include<conio.h>

```
void main()
{
        printf("Rollno \t \t Name \t \t \t Marks \n");
        printf(" 10 \t \t Asim \t \t \t 56\n");
        printf("11 \t \t Abid \t \t \t 95 \n");
}
```

LECTURE NO. 5

PREVIEW OF TODAY'S TOPICS
☞   **Scanf() Function & Character Input**

SCANF() FUNCTION & CHARACTER INPUT
LONG QUESTION

1.   **Write a note on scanf() function with one example.**   **(BWP 2019)**

SHORT QUESTIONS

1.   **Why & operator is used in scanf () function?** **(BWP 2021, 2022) (MTN 2021) (GRW 2017) (A.B)**

3.   **What is scanf() function.**   **(K.B)**
4.   **What is format string in scanf foundation?**   **(SWL 2021) (U.B)**
5.   **List 2 names of function used for character input.**   **(FSD 2021)(U.B)**
6.   **Write the difference between getch() and getche() function.**   **(MTN 2022)(GRW 2021)**
                                                                                (LHR 2018) (U.B)

SCANF FUNCTION:

scanf function accept user input from the keyboard. The input is stored into a variable in a specified format. The scanf function is versatile as it is equally good for numeric as well as string input. The scanf function is defined in stdio.h header file. It takes as arguments a format string and a list of variables to hold the input values.

The syntax of scanf function is
        scanf(format string, &var1, &var2, &var3,.....);

Format string:

The format string of scanf consists of a list of format specifiers only, no other value or text can be specified in it

List of variables:

Variables name are used to store the value entered by the user. The scanf function requires address of the variable to store the input values into it. An ampersand character(&) is used before the variable name. In C & is actually the address of operator. The address of operator (&) tells the scanf function the address of the variable where the input is to store. If & is omitted the scanf will not be able to locate and store the value into the variable in memory and the program will find a garbage value in the variable.

Example #1:

Write a program to convert the distance in kilometers into meters.

```c
#include<stdio.h>
#include<conio.h>

void main()
{
    double km, m;
    clrscr();
    printf("Enter the distance into kilometers : ");
    scanf(" %lf ", &km);
    m = km * 1000;
    printf("Distance in meters = %lf ", m);
    getch();
}
```

CHARACTER INPUT:

There are many functions in C to accept character input. The scanf function can also be used for character input. But the scanf requires pressing the enter key at the end of input value. In some cases it is not desirable to input characters without pressing the enter key. For example in a game we might want a spaceship to move each time we pressed one of the arrow keys: it would be awkward to press the enter key each time we pressed an arrow key. we can use the getch and getche functions for this purpose. These are the part of conio library.

getch and getche functions:

The getch and getche functions are used for character input. The getch function does not echo the typed character while the getche function echo the typed character to the screen.

Both of these function do not accept any argument and there is no need to press enter key after typing the character. The header file conio.h is included in the program to use these functions.

Example:

Write a program that displays the ASCII code of the character typed by the user.

```
#include<stdio.h>
#include<conio.h>
void main()
{
        char ch;
        printf("Enter a character : ");
        ch = getche();
        printf("The ASCII code of %c is = %d ", ch, ch);
}
```

Output:

       Enter a character : A

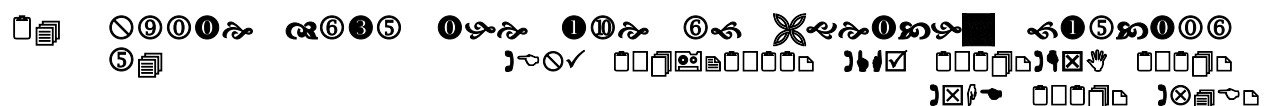   The ASCII code of A is = A 65

MULTIPLE CHOICE QUESTIONS

1. **The function getche () is defined in.**   **(SGD 2021)**

   (a) Stdio.h   (b) String.h

   (c) Math.h   **(d) Conio.h**

2. **The & symbol is scanf function indicate variable's**   **(GRW2021)**

   (a) address   (b) value

   (c) format   (d) data type

3. **In statement**   **(FSD 2021)**

   scanf ("%c", & km);

   km is a(n):

   (a) Integer variable   (b) Character variable

   (c) Float variable   (d) String variable

4. **The scanf () is a:**   **(RWP 2018)**

   (a) Built –in function   (b) User defined function

   (c) Local function   (d) Keyword

5. **Which of the following function is used for character input?**

   (a) getch()   (b) getche()

   (c) scanf()   (d) All of these

6. **Which function is use to input data in C-language?**

   (a) scanf()   (b) printf()

   (c) sqrt()   (d) pow()

SHORT QUESTIONS

1. **Why & operator is used in scanf ( ) function?** **(BWP 2021, 2022) (MTN 2021) (GRW 2017) (A.B)**

Ans: An ampersand character (&) is used before the variable name. In C & is actually the address of operator. The address of operator (&) tells the scanf function the address of the variable where the input is to store. If & is omitted the scanf will not be able to locate and store the value into the variable in memory and the program will find a garbage value in the variable.

Ans: The getch function is very handy in character manipulation. In contrast to the getch function which does not echo the character typed. This function do not accept any argument.

3.   Write the difference between getch() and getche() function.   (MTN 2022) (GRW 2021) (LHR 2018) (U.B)

Ans: Following are the difference between getch() and getche() function.

getch() function	getche() function
The getch functions are used for character input.	The getche functions are used for character input.
The getch function does not echo the typed character	while the getche function echo the typed character to the screen.
getch() function do not accept any argument and there is no need to press enter key after typing the character.	getche() function do not accept any argument and there is no need to press enter key after typing the character.
getch() function is declared in conio.h header file.	getche() function is declared in conio.h header file.

4.   What is format string in scanf foundation?   (SWL 2021) (U.B)

Ans: The scanf function takes as arguments a format string and a list of variables to hold the input values.
The syntax of scanf function is :
scanf(format string, &var1, &var2, &var3,.....);

5.   List 2 names of function used for character input.   (FSD 2021)(U.B)

Ans: there are two type of function for character input.
- Getch function
- Getche function

6.   What is scanf () function?   (K.B)

Ans: scanf function accept user input from the keyboard. The input is stored into a variable in a specified format. The scanf function is versatile as it is equally good for numeric as well as string input. The scanf function is defined in stdio.h header file.

STUDENTS LEARNING OBJECTIVES (SLOs)

MULTIPLE CHOICE QUESTIONS

Knowledge Based Questions

(i) The function printf and scanf can be accessed by including library:

(a) conio.h   **(b) stdio.h**

(c) math.h   (d) string.h

(ii) The symbol & before the variable name represent.

(a) Value   **(b) Address**

(c) Data type   (d) None of these

(iii) Format specifier is used in:

(a) Loop   (b) Constant

(c) Format string   (d) None of these

(iv) The number of columns used to display a value on screen is referred.

(a) Escape sequence   (b) Array

(c) Structure   **(d) Field-width**

(v) Which function does not echo the character typed?

(a) getch   (b) getche

(c) scanf   (d) getc

Understanding Based Questions

(i) The number of variables can be used in printf function.

(a) One   (b) Two

(c) Three   **(d) Many**

(ii) Which of the following format specifier is used for float data type?

(a) %f   (b) %d

(c) %g   (d) %c

(iii) The escape sequence for form feed is:

(a) /f   (b) \fo

(c) \f   (d) \d

(iv) The functions that are very handy in character manipulation.

(a) printf   (b) getch

(c) getche   **(d) Both (b) & (c)**

(v) Which of the following is not valid escape code?

(a) \t   (b) \v

(c) \y   (d) \f

Application Based Questions

(i) The ampersand used in scanf() function is called.

(a) Address indicator   (b) Cell address

(c) Control   (d) Program

(ii) If float v = .6789 and format specifier is %4.2f the output will be.

(a) 0.67   (b) .67

(c) 78   **(d) 0.68**

(iii) What will be the output of the following point f("%.2f", 5.5555);

(a) 5.555   **(b) 5.55**

(c) 5.56   (d) 5.00

(iv) The ASCII code for escape key is:

(a) 27   (b) 28

(c) 29   (d) 30

(v) Which of the following function is used to output data in C programs?

(a) printf   (b) Getch

(c) Getche   (d) Scanf

SHORT QUESTIONS

Knowledge Based Questions

Q.1 What is printf() function.

Ans: Printf

The printf function is used to print the output of the program in specified format. It takes

arguments a format string and an optional list of variables. The values of variables are displayed according to format specifier in the format string. The printf function can be access in a program by including stdio.h header file.

Q.2   What is format specifier?   **(SWL 2022) (RWP 2022) (RWP 2022)**

Ans: Format Specifier

Format specifier specify the format in which the value of a variable should be display on the screen. Format specifiers are specified in the format string and always start with % symbol.

Q.3   What is scanf() function.

Ans: scanf() function

scanf function accept user input from the keyboard. The input is stored into a variable in a specified format. The scanf function is versatile as it is equally good for numeric as well as string input. The scanf function is defined in stdio.h header file.

Q.4   Write the syntax of printf() function.

Ans: The syntax of printf function is

- printf(format string);
- printf(format string, var1, var2, var3,......);
- The format string is a character string and variables are optional.

Q.5   Write the syntax of scanf() function.

Ans: The scanf function takes as arguments a format string and a list of variables to hold the input values.

The syntax of scanf function is

scanf(format string, &var1, &var2, &var3,.....);

Q.6   Define standard input & output?   **(FSD 2021) (DGK 2021)**

Ans: In C, the standard input/output library provides functions to perform input and output operations. By standard input and output, we mean the keyboard and monitor respectively. In C, these input/output operations are performed by two standard input/output functions, these are printf() nad scanf(). These functions can be accessed by including the standard input/output library (stdio.h) in the program.

Understanding Based Questions

Q.1   List four format specifiers used in C language?

Ans:

Symbol	Data type
%d	int, short
%f	float
%lf	double
%e	float, double (Exponential Notation)

Q.2   How can you specify the field specifier of integer?

Ans: To specify the field width of an integer value just add a number between % and d of the %d format specifier in the printf format string. This number specifies the field width.

Example

int area = 45;

printf("Area = %4d ", area);

Ans: Output:

Area=☐☐45

Q.3   Write the difference between getch and getche function.   **(MTN 2022)**

Ans: The getch and getche functions are used for character input. The getch function does not echo the typed character while the getche function echo the typed character to the screen. Both of these function do not accept any argument and there is no need to press enter key after typing the character. The header file conio.h is included in the program to use these functions.

Q.4   Correct the following statement.

printf(Hello World);

Ans: printf("Hello World");

Q.5   printf("C programming is \t easy");

Ans: C programming is   easy

Q.6   **What is the output of the following code?**
        float avg= 98.20;
        printf("Average = %5.2f", avg);
Ans: Average = 98.20

Application Based Questions

Q.1   **Write a program that calculate and print the area of a square.**
Ans: **Program**

```
#include <stdio.h>
#include <conio.h>
void main()
{
int height, width, area;
clrscr();
height = 5;
width  = 6;
area = height * width;
printf(" Area of square is  = %d ", area);
getch();
}
```

Output:

Area of square is =30

Q.2   **Give some examples for field width for integer number:**
Ans: The following table show how different integer values are displayed using different format specifiers:

Value	Format specifier	Displayed output
786	%4d	□786
786	%1d	786
786	%6d	□□□786
-786	%2d	-786

Q.3   **Trace the output**

```
void main()
{
char w1, w2, w3;
w1='A';
w2='B';
w3='C';
printf("%c %c w3", w1,w2);
}
```

Ans: A B w3

Q.4   **Trace error in following code.**

```
void main();
{
Printf(OK)
}
```

Ans: