Assignment – 2

1. Differentiate assignment and initialization.
2. Write an algorithm for leap year.
3. What will be the output of following program ?

```
main ( )
{
   int x;
   x= -3 * - 4 %  -6 / -5;
   printf("x = %d", x);
}
```

(i) Error message: Invalid indirection
(ii) x = 0
(iii) x = 3
(iv) Error message: Invalid indirection
(v) No Output

4. What is the difference between ++a and a++? Discuss about the following operators in C language with example.
(i) Bitwise operators
(ii) Increment and decrement operators
(iii) Logical operators

5. Discuss the switch case statement with example?

6. Explain String? Write a program to print Armstrong number?

7. Differentiate between getchar and scanf functions ? Inresponse to the input staternent
scanf (" %4d%* %d", &year, &code, & count);
the following data is keyed in 19883745.
What values does the computer assign to the variables Year, code and count?

8. Explain difference between "if-else" and "switch-case"
With example.

9. Draw flow chart for generating Fibonacci series.

10. Write the output of the following program :

```
#include<stdio.h>
main()
{
   int i=5;
   printf("%d\n%d\n%d\n%d\n%d\n", i++ , i--, ++i, --i,  i );
}
```

11. What is an Operator ? Write different types of operators
in C.

12. Draw flow chart to input 'n' numbers from user. Calculate
sum of digits of all even numbers and display it.

13. What is type conversion? Explain two types of conversion with suitable examples.

14. Explain the following with proper example:
(i) break
(ii) continue
(iii) goto

 What will be the output of the below C programs?

15. `#include<stdio.h>`

```c
int main()
{
   int a=5;
   printf("%d", ++a++);
   return 0;
}
```

   a) 6
   b) 5
   c) Compile-time error
   d) 7

16. `#include<stdio.h>`

```c
int main()
{
   int a=3, b=9;
   printf("%d ", ++(a*b+1));
   return 0;
}
```

      a)Compile-time error
      b) 29
      c) 28
      d) None of these

17. `#include<stdio.h>`

```c
int main()
{
   int a=2,b=1,c=0;
   c = a +++ b;
```

```c
    printf("%d %d %d",a,b,c);
    return 0;
}
```

a)3 1 3
b) Compile-time error
c) 2 2 4
d) None of these

18.
```c
#include<stdio.h>

int main() {
    int i=4;
    switch(i) {

        default :
            printf("%s","Default");
        case 0:
            printf("%s","Case 0");
        case 1:
            printf("%s","Case 1");
        case 2:
            printf("%s","Case 2");

        }
    return 0;

}
```

19.
```c
#include <stdio.h>
void main()
{
    char *ch;
    printf("enter a value between 1 to 3:");
    scanf("%s", ch);
    switch (ch)
    {
        case "1":
            printf("1");
            break;
        case "2":
            printf("2");
            break;
    }
}
```

20. What will be the output of the following C code? (Assuming that we have entered the value 1 in the standard input).

```c
1.#include <stdio.h>
2.    void main()
3.    {
4.         int ch;
5.         printf("enter a value between 1 to 2:");
6.         scanf("%d", &ch);
7.         switch (ch, ch + 1)
8.         {
9.            case 1:
10.                   printf("1\n");
11.                   break;
12.               case 2:
13.                   printf("2");
14.                   break;
15.            }
16.          }
```