CONTROL STATEMENTS

1.
```
#include<stdio.h>
int main()
{
	int num=45;
	if(num>>3&4)
		num=num<<2;
	else
		num=num>>5;
printf("%d",num);
}
```

2.
```
#include<stdio.h>
int main()
{
int r,s=25;
if(r++=s++)
	printf("%d",r);
else
	printf("%d",s);
}
```

3.
```
#include<stdio.h>
int main()
{
int x=-1;
if(x)
{
x=1;
if(!x)
printf("Joy");
else
printf("Happy");
}
else
{
printf("Blissful");
}
}
```

4.What is the purpose of using break statement in c and where it can be used.

5. #include<stdio.h>
int main()
{
char ch=259;
int x=2;
if(ch == ++x)
printf("ABC");
else
printf("DEF");
}

6.#include <stdio.h>
int main() {
  int a=20,b=6;
  if(a=5)
  b++;
  printf("%d %d",++a,b++);
}

7.#include<stdio.h>
int main()
{
int x= 99,y=87;
if(y++,x > 100);
printf("Hello");
printf("Hi");
}

8.#include <stdio.h>
int main() {
  int val1,val2=100,num=500;
  if(val1=val2%2)
  num=200;
  printf("%d %d %d",val1,val2,num);
}

9.Write a program that takes years as input and check if it is a leap year or not.

10.#include<stdio.h>
int main()
{
int x = 0;
if (x == 1)

```
if (x >= 0)
printf("true\n");
else
printf("false\n");
}
```

11.
```
#include<stdio.h>
int main(){
int i = 0, j = 1, k = 0;
if(++k, j, i++)
printf("%d %d %d", i, j, k);
return 0;
}
```

12.
```
#include<stdio.h>
int main()
{
int i = 65;
switch(i)
{
case 65:
printf("Integer 65");
break;
case 'A':
printf("Char 65");
break;
default:
printf("Bye");
}
return 0;
}
```

13.
```
#include<stdio.h>
int main()
{
int i = 5, j = 6, k = 7;
if(i > j == k)
printf("%d %d %d", i++, ++j, --k);
else
printf("%d %d %d", i, j, k);
return 0;
}
```

14.#include<stdio.h>
int main()
{
int i = 5;
if(i = i - 5 > 4)
printf("inside if block");
else
printf("inside else block");
return 0;
}

15.#include<stdio.h>
int main()
{
switch(2/2)
{
case 1:
printf("case 1 executed ");
case 2:
printf("case 2 execcuted ");
break;
default:
printf("Default block executed");
}
return 0;
}

16.#include<stdio.h>
int main()
{
printf("%d ", 1);
goto l1;
printf("%d ", 2);
l1:goto l2;
printf("%d ", 3);
l2:printf("%d ", 4);
}

17.#include<stdio.h>
int main()
{
int i = 0;
if (i == 0)

```
{
printf("Hello");
continue;
}
}
```

18.
```
#include<stdio.h>
int main()
{
	int i=10,j=20;
	if(i++,i++,j<20)
	{
		printf("hai");
		goto l;
	}
	else
		printf("hi");
	l:printf(" %d",i);
}
```

19.
```
#include<stdio.h>
int main()
{
	int a=0,b=2,c=3,d=1;
	if(b|a&&d)
		printf("hai\n");
	if(a|--d&&c)
		printf("hello");
	else
		printf("bye");
}
```

20.
```
#include<stdio.h>
int main()
{
int a=5,b=6;
switch(a&b)
{
	case 2+2:printf("One");
	case 5*1  :printf("Two");break;
	case 20/5-1:printf("Three");
	default:printf("def");break;
}
```

```
}
```

21.
```
#include<stdio.h>
int main()
{
int res=1;
switch(res/5)
{
	case 1:printf("case 1");
	case 0:printf("case 0");
	case 2:printf("case 2");break;
	default:printf("def");
}
}
```

22.
```
#include<stdio.h>
int main()
{
	int p=-1;
	p>>=2;
	if(p&~p<<3)
	  printf("if");
	else if(p)
		printf("else if");
	else
		printf("else");
}
```

23.
```
#include<stdio.h>
int main()
{
	int a=10;
	if(a-=a*a-a)
		printf("Good\n");
	else
		printf("Better\n");
	printf("%d",a);
}
```

24.
```
#include<stdio.h>
int main()
{
	int i=0,l=10;
```

```
label:
        i+=2;
        printf("%d ",i);
        if(i++<l)
        goto label;
        printf("%d ",i);
}
```

25.
```
#include<stdio.h>
int main()
{
   int c=55.0;
   switch(c)
   {
   case 54:printf("English");
          break;
   case 55.0:printf("Maths");
          break;
   }
}
```

26.
```
#include<stdio.h>
int main()
{
        int s=5;
        s*s:printf("Hi ");
           printf("Hello\n");
        if(8>>3+5)
              goto s*s;
}
```

27.
```
#include<stdio.h>
int main()
{
        float f=5.6;
if(f==5.6)
        printf("hi\n");
else if(f==(float)5.6)
        printf("hello\n");
else if(f==5.6f)
        printf("hai");
}
```

28.#include<stdio.h>
```
int main()
{
	char a='A',b='B';
q:
	printf("%c",a-18);
	printf("%c\n",b-19);
	break;
	goto q;
}
```

29. #include<stdio.h>
```
int main()
{
int num='1';
switch(--num,num++)
{
	default:printf("default\n");
	case 47:printf("case 47\n");
	case 48:printf("case 48\n");
	case 49:printf("case 49\n");

}
}
```

30.#include<stdio.h>
```
int main()
{
if('\0')
printf("hi");
printf("hello");
else
printf("bye");
}
```

31.#include<stdio.h>
```
int main()
{
int a = 1;
if(a--)
printf("A");
if(a++)
printf("B");
```

```
if(!a)
printf("C");
if(!!a)
printf("D");
}
```

```
32.#include<stdio.h>
int main()
{
int x1=5,x2=6,x3=6;
if(x1<x2>>1)
printf("yes");
if(x3<=x2>>0)
if(x1=3,x2=0)
printf("%d",x2);
else
printf("%d",x1);
}
```

```
33.#include<stdio.h>
int main()
{
	double d=12.7;
	int i=d;
	switch(d++,i++)
	{
		case 10:printf("One");
		case 11:printf("Two");
		case 12:printf("Three");
	}
}
```

```
34.#include<stdio.h>
int main()
{
	int a=5;
label1:
	if(a--,++a)
		printf("%d ",a);
	a++;
	if(a==10)
		goto label2;
	goto label1;
```

```
label2:
a/=a+3;
printf("%d",a);
}
```

35.
```
#include<stdio.h>
int main()
{
if((sizeof(0)==sizeof('0'))
printf("Equal");
else
printf("Not equal");
}
```

36.
```
#include<stdio.h>
int main()
{
l:
goto m;
s:
printf("hi");
m:
goto s;
}
```

37.
```
#include<stdio.h>
int main()
{
int i=5,j=6;
if(i++<--j)
if(0,--i>j++,i-=5)
printf("c");
else if(++i)
printf("c++");
else
printf("python");
}
```

38.
```
#include<stdio.h>
int main()
{
int i = 0;
switch(++i)
```

```
{
case 0 : i++;
case 1 : i++ +2;
case 2 : ++i;
}
pritnf("%d",i++);
return 0;
}
```

39.
```
#include<stdio.h>
int main()
{
switch(25)
{
case 25L:
printf("25L");
break;
case 26:
printf("26");
break;
default:
printf("Nothing");
break;
}
return 0;
}
```

40.Write a program to find the second largest number using nested if.

41.
```
#include<stdio.h>
int main(){
int n = 4;
switch(n)
{
case 1:
printf("Hai case 1 ");
default:
printf("Hai default ");
case 2:
printf("Hai case 2 ");
case 3:
printf("Hai case 3 ");
}
```

```
return 0;
}
```

42.
```
#include<stdio.h>
int main()
{
	int m=10,n=20;
	if(m/n/m)
		goto o;
			printf("Operating ");
	o:
	printf("System\n");
}
```

43.What is the difference between if else and switch statement?

44. Which datatype can accept the switch statement?

a) int
b) char
c) long
d) all of the mentioned

45.
```
#include <stdio.h>
int main()
{
 int a = 1, b = 1;
switch (a)
{
case a*b:
printf("yes ");
case a-b:
printf("no\n");
break;
}
}
```

46.
```
#include<stdio.h>
int main(){
switch(true)
case true:
printf("Hai. This is True");
break;
case false:
printf("Hai. This is False");
```

```
break;
default:
printf("Bye.");
break;
return 0;
}
```

47.
```
#include <stdio.h>
int main()
{
printf("%d ",1);
goto l1;
printf("%d ", 2);
l1:l2:
printf("%d\n", 3);
goto l2;
}
```

48.
```
#include <stdio.h>
int main()
{
int i = 0;
if (i == '0')
{
goto label;
}
label: printf("Hello");
}
```

49.
```
#include<stdio.h>
int main()
{
	int m=15,n=25,p=0;
	if(1>0?m<n?m++,n++:m++,p++:m++,p++)
		printf("true\n");
	printf("%d %d %d",m,n,p);

}
```

50.
```
#include<stdio.h>
int main()
{
int i = 0;
if(++i)
```

```
{
i == --i?i = 0:i = 1;
}
printf("%d", i);
return 0;
}
}
```