1. write a program to perform Bitewise operations.

Ans. source code

```c
#include < stdio.h>
#include< conio.h>
void main()
{
int a, b;
Printf ("enter the value of a: ");
scanf ("%d",&a);
Printf ("enter the value of b: ");
scanf ("%d", &b);
Printf ("%d\n", a&b);
Printf ("%d\n", a|b);
Printf ("%d\n", a^b);
Printf ("%d\n",~a);
Printf ("%d\n", a<<b);
Printf ("%d\n", a>>b);
getch();
}
```

Input
enter the value of a: 4
enter the value of b: 2

output
4 & 2 is 0
4 | 2 is 2

4 ^ 2 is 6

~4 is -5

4 < < 2 is 16

4 > > 2 is 1

2. write a program to perform Relational operators.

Ans: source code

```
# include < stdio.h >
# include < conio.h >
void main()
{
    int a, b;
    Printf("enter the value of a:");
    scanf("%d",& a);
    Printf("enter the value of b:");
    scanf("%d", & b)
    Printf("%d\n", a <b);
    Printf("%d\n", a >b);
    Printf("%d\n", a ==b);
    Printf("%d\n", a!= b);
    Printf("%d\n", a<= b);
    Printf("%d\n", a>= b);
    getch();
}
```

Input:
enter the value of a: 4
enter the value of b: 2

output

4 < 2 is 0 (False)
4 > 2 is 1 (True)
4 == 2 is 0 (False)
4 != 2 is 1 (True)
4 <= 2 is 0 (False)
4 >= 2 is 1 (True)

3.

(i) MCQ's on right shift & left shift operation
(ii) MCQ's on Increment & decrement.

Ans: (i)
1. what is the primary function of the right shift (>>) operator for positive integers in most programming languages (C, C++, Java, Python)?

A) Multiply the number by 2 for each shift.
B) Divide the number by 2 for each shift (integer division / floored.)
C) Add 2 to the number for each shift.
D) subtract 2 from the number for each shift.

2. what is the result of the expression 10 >> 1 in C ?

A) 10
B) 20
C) 5
D) 1

3. when an unsigned integer is right-shifted, what value are the vacated leftmost bit positions filled with?

A) The sign bit (most significant bit).
B) ones (1s)
C) zeros (0s)
D) It depends on the compiler implementation.

4. In C programming, what is the result of the expression 16 >> 3?

A) 0
B) 2
C) 4
D) 8

5. If a
255 (
expr

A) 25
B) 15
C) 0
D) 24

(ii) Ir
A) 3
B) 2
c) 4
D) 6

(ii)
1. wh
op

a)
b)
c)
d

2.
c

5. If an unsigned char variable x holds the value 255 (binary 11111111), what is the value of the expression x>>4?

A) 255
B) 15
C) 0
D) 240

(i) In C, what is the result of the expression 12<<2

A) 3
B) 24
c) 48
D) 6

(ii)

1. what is the primary function of increment (++) operator in c?

a) Multiplies the value of the variable by 1
b) Increments the value of the variable by 1.
c) Decrements the value of the variable by 1
d) Divides the value of the variable by 1

2. what will be the value of J after the following code shippet executes?

```c
int i = 5, j;
j = i++;
```

a) 5
b) 6
c) 4
d) undefined

3. Which of the following is an invalid operand for the increment and decrement operators?

a) A variable (i++)
b) A pointer (*P++)
c) A constant (++5)
d) A floating-point number (f++).

4. What is the output of the following c code?

```c
int x=5, y;
y = x++ / 2;
printf("%d", y);
```

(a) 3
b) 2
c) 2.5
d) compile-time error

5. What will be the final value of a and b after the following code snippet executes?

```c
int a=4, b, c;
b = --a;
c = a--;
```

a) a=3, b=3, c=3
b) a=2, b=3, c=3
c) a=2, b=3, c=2
d) a=3, b=2, c=3