

Read problem statements.

1) Read two integer values from perform

Bitwise ex 4,2 and &, |, ~, ^, <, >, <=

2) Read two integer values from <, >, !, ==

Show the answers below the page's in coding with

out puts:-

Coding C

RUN MENU

Auto saved at 23:54:00

```
1 #include<stdio.h>
2
3 int main(){
4     int a=4;
5     int b=2;
6     printf("a&b=%d\n", a&b);
7     printf ("a|b=%d\n", a|b);
8     printf ("a~b=%d\n", ~a);
9     printf ("a^b=%d\n", a^b);
10    printf ("a<<1=%d\n", a<<1);
11    printf ("b>>1=%d\n", b>>1);
12    return 0;
13 }
```

Tab {} ; ↶ ⇧ ⇢
= \ & , ⇤ ⇣ ⇡

Compile Result

```
a&b=0  
a|b=6  
a~b=-5  
a^b=6  
a<<1=8  
b>>1=1
```

```
[Process completed - press Enter]
```

Coding C

RUN MENU

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```
1 #include<stdio.h>
2
3 int main() {
4     int a=4;
5     int b=2;
6     int result_shift;
7     int result_and;
8     //Bitwise left shift operation
9     result_shift=a<<b;
10    //Bitwise AND operation
11    result_and=a&0;
12    printf ("the value of a<<b is: %d\n",result_shift);
13    printf ("the value of a&0 is:%d\n",result_and);|
14    return 0;
15 }
```

Tab { " " ; ↶ ⇧ ⇢
= \ & , ⇣ ⇤ ⇣

Compile Result

```
the value of a<<b is: 0  
the value of a&0 is:420189509
```

```
[Process completed - press Enter]
```

15 (MCQs) relate to increment operators inc.

1. What is the output of the following C code snippet?

C

```
int x=5;
```

```
int y=x++;
```

```
printf ("%d %d", x, y);
```

a) 5 5

b) 6 5

c) 5 6

d) 6 6

Answer: b) 6 5

2. What is the output of the following C code snippet?

C

```
int a=10;
```

```
int b=++a;
```

```
printf ("%d %d", a, b);
```

a) 10 10

b) 11 10

c) 10 11

d) 11 11

Answer: d) 11

3. Consider the following code:

```
int i=5; printf ("%d", i++ * 2); what will be printed?
```

a) 10

b) 12

c) 5

d) 6

Answer: a) 10.

4) what is the final value of k after the following operations?

c

int k = 3;

$k = ++k + k++;$

a) 7

b) 8

c) 9

d) undefined behavior

Answer: d) undefined behavior.

5) which of the following statements about increment operators is true?

a) $++x$ and $x++$ always produce the same result in any context.

b) $++x$ modifies the variable before its value is used in an expression.

c) $x++$ modifies the variable before its value is used in an expression.

d) Increment operators can only be used with integer variables.

Answer: b) $++x$ modifies the variable before its value is used in an expression.

6) If int $p = 7$; what is the value of p after $p += ++p$?

a) 7

b) 8

c) 15

d) undefined behavior

Answer: d) undefined behavior

7) which of the following is equivalent to $x = x + 1$?

a) $x--;$

b) $x += 1;$

c) $x = + 1;$

d) $x / = 1;$

Answer: b) $x += 1;$

8) In the expression $a++ + ++b$, which operator has higher precedence?

a) $++$ (postfix increment)

c) Both have equal precedence.

b) $++b$ (prefix increment)

d) Operator precedence is not relevant here.

Answer a) $a++$ (postfix increment).

Q) What is the output of the following code?

L

int m=2;

int n=3;

int result = m++ * --n;

printf("%d %d %d", result, m, n);

a) 6 32

b) 432

c) 6 23

d) 423

Answer: b) 432

10. If $\text{int val} = 10$; what is the value of val after $\text{val} = \text{val} + ?$ ()

a) 10

b) 11

c) 9

d) Undefined behavior

Answer: d) undefined behavior.

10- Multiple -choice questions on decrement operators inc , dec , -- .

f) What is the primary function of the decrement operator $(--) \text{ inc}$ ()

a) To increase the value of a variable by 1.

b) To decrease the value of a variable by 1.

c) To multiply the value of a variable by -1.

d) To check if a variable is less than another.

Answer: a) To increase the value of a variable by 1.

2. Which symbol represents the decrement operators inc ? ()

a) $++$

c) $+ =$

b) $--$

d) $- =$

Answer: b) --

3. what is the primary purpose of the decrement operators?

- a) to increase the value of a variable by 1.
- b) to decrease the value of a variable by 1.
- c) to multiply the value of a variable by 1.
- d) to divide the value of a variable by 1.

Answer: b) to decrease the value of a variable by 1.

4. what are the two forms of the decrement operators?

- a) pre-increment and post-increment
- b) pre-decrement and post-decrement
- c) prefix and suffix
- d) unary and binary.

Answer: b) pre-decrement and post-decrement.

5. In `int x=5; int y=--x;`, what are the final values of `x` and `y`?

- a) $x=6, y=5$
- b) $x=5, y=6$
- c) $x=6, y=6$
- d) $x=5, y=5$

Answer: c) $x=6, y=6$.

6. which stat statement describes the behavior of the pre-decrement operator?

- a) Decrement the value after the expression is evaluated.
- b) Decrement the value before the expression is evaluated.
- c) Assign the original value, then decrements.
- d) Only works with floating-point numbers.

Answer: b) Decrement the value before the expression is evaluated.

7) In which of the following expression will the variable be decremented after its value is used?

- a) $--\text{myVar}$
- b) $\text{myVar} = --\text{myVar}$
- c) $\text{myVar} = \text{myVar}--$
- d) Both b and c.

Answer: c) $\text{myVar}--$

8) In which of the following expression will be the variable be decremented before its value is used?

- a) $--\text{myVar}$
- b) $\text{myVar} = --\text{myVar}$
- c) $\text{myVar}--$
- d) Both b and c.

Answer: a) $--\text{myVar}$

9) What is the primary purpose of the decrement operator ($--$)?

- a) To increase the value of a variable by one.
- b) To decrease the value of a variable by one.
- c) To multiply a variable by a negative number.
- d) To compare two variables.

Answer: b) The decrement operator is used to decrease the value of a variable by one.

10) What will be the output of `printf("%d", 5+--3);`?

- a) This is a syntax error.
- b) 7
- c) 8
- d) 9

Answer: a) The decrement operator $--$ can only be applied to a variable, not a literal number like 3.