

# CS & IT ENGINEERING



## C-Programming

Data type and Operators  
Discussion Notes

DPP No.- 2



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```
#Q. include <stdio.h>
int main(void)
{
    int a;
    a = 2 * 6/5 + 3.0/2 + 1;
    printf("%d", a);
    return 0;
}
```

The value of a is 4

A 4.9

C 4.5

B 4.0

D 4

$$a = 12/5 + 3.0/2 + 1$$

$$= (2 + 1.5 + 1) = \underline{4.5}$$

$$= 3.5 + 1 = \underline{4.5}$$

```
#Q. #include <stdio.h>
int main(void)
{
    int a;
    a = 16.0 / 4 * 5 % 3;
    printf("%d", a);
    return 0;
}
```

The value of a printed is \_\_

A Compiler error ✓

C 2

B 8.0

D 8

Division multiplication modules  
Left to Right

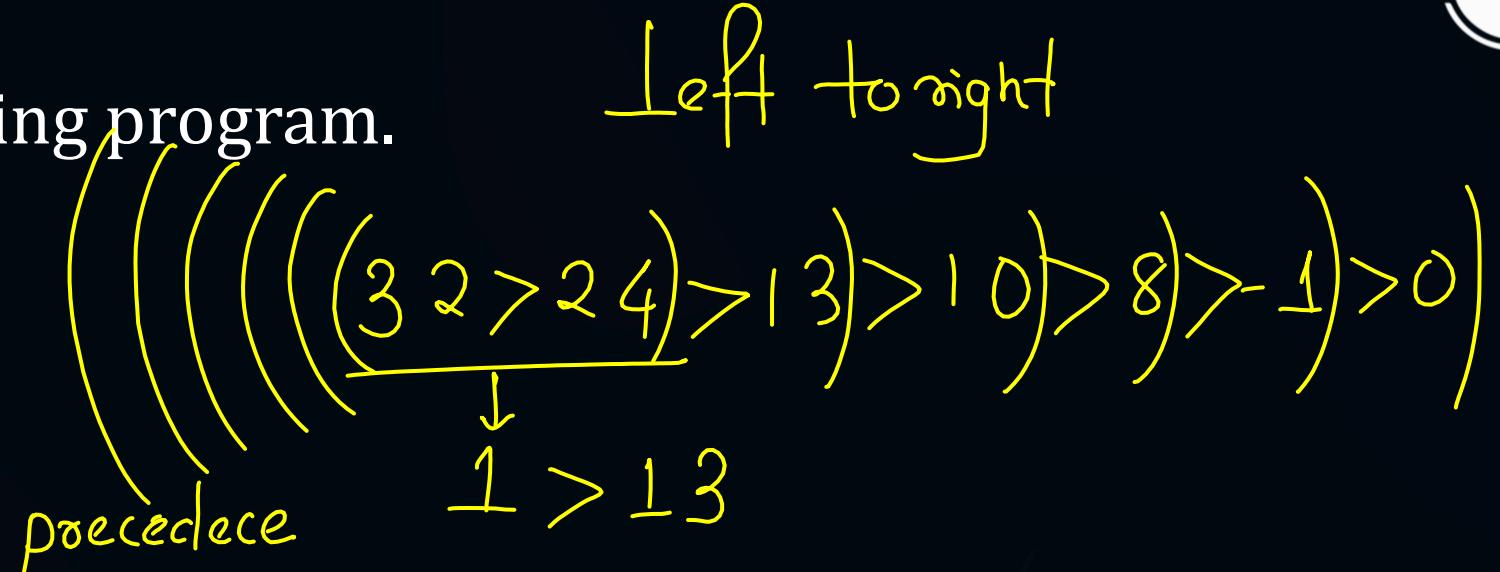
$$\begin{aligned} 4.0 * 5 \% 3 &= \\ &= 20.0 \% 3 \end{aligned}$$

floating point  
modulus  
operators Not  
allowed

#Q. Consider the following program.

```
#include<stdio.h>
void main()
{
    int a;
    a = 32 > 24 > 13 > 10 > 8 > -1 > 0;
    printf("%d",a);
}
```

The output is 1.



Associativity Rule

$0 > 8 > -1 > 0$

$0 > -1 > 0$

$1 > 0 \circledcirc 1$

```
#Q. #include<stdio.h>
void main()
{
    int a;
    a = 25 > 15 > 0 != 12 < 45 > 42 != 65;
    printf("%d", a);
}
```

The output is \_\_\_\_.

$=, !=$  Lower precedence

$25 > 15 > 0 != 12 < 45 > 42 != 65$

①  $> 0 != 12 < 45 > 42 != 65$

$1 != 1 > 42 != 65$

$(1 != 0 != 65)$

$1 != 65$

1

#Q. Consider the following program:

```
#include<stdio.h>
void main() {
    int a = 0, b = 1;
    a = (a = 5) && (b = 0);
    printf("%d", a); 0
    printf("%d", b); 0
}
```

The output is:

A 50

C 10

$a \boxed{50} \quad b \boxed{0}$

$a = (a = 5) \underline{\&\&} (b = 0)$

$a = \underline{\underline{0}}$

B 00

D Compiler error

#Q. Consider the following statements:

P: The precedence of the modulus operator is higher than multiplication or division operator.

Same - Incorrect

Q: The result of the modulus operator contains the sign of the second operand.

Which of the following statements is/are INCORRECT?

- A Only P
- B Only Q
- C Both P and Q ✓
- D Neither P nor Q

$-5 \% 2 \rightarrow \text{Negative}$

#Q. Consider the following program:

```
#include<stdio.h>
void main()
{
    int a = 2022;
    printf("%d%d%d", a!=2024, a=2023, a==2021);
}
```

1 2023 0

The output is-

A

020220

C

002021

B

020231

D

120230

#Q. Consider the following program:

```
#include<stdio.h>
void main()
{
    int x=-2023;
    printf("%d", ~(x=x+5));
}
```

The output is 2017.

$$X = -2023$$

bit operator

$$X = -2023 + 5 = -2018$$

$$\sim(-2018) \sim 2018 + 1$$

$$\sim = -(-2018 + 1)$$

$$= -(-2017) = 2017$$



# THANK - YOU