

Questions

1- What will happen if we divide by zero?

- a. Time limit.
- b. Memory limit.
- c. Runtime error.
- d. Stack overflow.

2- What is equal to 100000?

- a. 10000000000 - 100000.
- b. 10000000000 / 10000.
- c. (int)1e5.
- d. 100000- 200000.

3- What is the result of dividing 3/2 in C++?

- a. 1
- b. 1.5
- c. 2
- d. A run-time error.
- e. none of the above

4- what is the difference between `x++` and `++x` ?

5- how to calculate the max number in (int - long long)

6- what is the size of (short,int, long long ,float ,double ,char ,bool ,string)

7- What is the size of "unsigned int"?

- a. 2 bytes
- b. 4 bytes
- c. 8 bytes
- d. 5 byte



Newcomers (*Datatypes & Conditions*)

8- What is the size of "signed int"?

- a. 2 bytes
- b. 4 bytes
- c. 8 bytes
- d. 5 byte

9- What is The number of bits in char data type?

10- Given two numbers a and b, your task is to print the remainder of division a by b , Note: **without using Modulo (%)** .

example a=9 b=4

output: 1



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11- What is the output ?

1)

```
#include<iostream>

using namespace std;

int main() {

    int x = 100000;

    int y;

    y = x;

    x *= y;

    cout << x;

}
```

- a. 100000
- b. 100000000000
- c. Run time error.
- d. Overflow

2)

```
#include<iostream>

using namespace std;

int main() {

    int x = 1000000000;

    int y = x * 2;

    cout << x + y / 2;

}
```

- | | |
|----------------|--------------------|
| a. 2000000000. | c. Run time error. |
| b. 1000000000. | d. Overflow |



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3)

```
#include <iostream>
using namespace std;
int main() {
    int a = 0, b;
    b = (a = 50) + 10;
    cout << a << "$" << b;
    return 0;
}
```

4)

```
#include<iostream>
using namespace std;
int main() {
    int x = 10, y = 20;
    if (x++ || y++) {
        y += 5;
    } else if (x == 10) {
        x -= 5;
    }
    if (y == 20) {
        y = x;
    }
    if (x++ && y++) {
        x += 5;
    }
    cout << x << " " << y << endl;
}
```



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5)

```
#include<iostream>

using namespace std;

int main() {

    int x = 3;

    if (4 > x > 2) {

        cout << "Well Done";

    } else {

        cout << "Right choice";

    }

}
```

6)

```
#include <iostream>
using namespace std;
int main() {
    int a = b = c = 0;
    cout << a << "*" << b << "*" << c;
    return 0;
}
```

7)

```
#include <iostream>
int main() {
    if (std::cout << "hello")
        std::cout << " world";
    else
        std::cout << " else part";

    return 0;
}
```



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8)

```
#include <iostream>
using namespace std;
int main() {
    char a = 30, b = 40, c = 10;
    char d = (a * b) / c;
    cout << int(d);
    return 0;
}
```

9)

```
#include <iostream>
using namespace std;
int main() {
    int a = 1;
    switch (a) {
        case 1:
            cout << "One";
        case 2:
            cout << "Two";
        case 3:
            cout << "Three";
        default:
            cout << "Default";
    }
    return 0;
}
```

- a. One
- b. Compilation Error
- c. Default
- d. OneTwoThreeDefault



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10)

```
#include <iostream>
using namespace std;
int main() {
    int a;
    a = 5;
    if (++a * 5 <= 25) {
        cout << "Hello";
    } else {
        cout << "Bye";
    }
}
```

- a. Hello
- b. Bye
- c. Undefined
- d. Compilation Error

11)

```
#include <iostream>
using namespace std;
int main() {
    int x = 5;
    if (x++ == 5)
        cout << "Five" << endl;
    else if (++x == 6)
        cout << "Six" << endl;
    return 0;
}
```

- a. FiveSix
- b. Five
- c. Six
- d. None of these



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12)

```
#include <iostream>
using namespace std;
int main() {
    int a;
    cout << "Size of int is: " << sizeof(a);
}
```

13)

```
#include <iostream>
using namespace std;
int main() {
    char a;
    a = 'R';
    cout << " Size of char is: " << sizeof(a) << endl;
    cout << " Value of a is: " << a;
}
```

14)

```
#include <iostream>
using namespace std;
int main() {
    bool a;
    cout << " Size of bool is: " << sizeof(a) << endl;
    cout << " Value of a is: " << a;
}
```




15)

```
#include <iostream>

using namespace std;

int main() {

    int x = 5,y=5;

    x = y++;

    y = ++x;

    x *= y;

    cout << x << " " << y;

}
```

16)

```
// logical operators

#include <iostream>

using namespace std;

int main() {

    cout << true << endl;

    cout << false << endl;

    cout << (true || false) << endl;

    cout << (true && false) << endl;

    return 0;

}
```



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17)

```
// relational operators.
#include <iostream>
using namespace std;
int main() {
    cout << (5 == 10) << endl;
    cout << (10 > 5) << endl;
    cout << ((5 >= 1) && (5 <= 10)) << endl;
    return 0;
}
```

18)

```
#include <iostream>
using namespace std;
int main() {
    char ch = 'a';
    cout << int(ch); return 0;
}
```

19)

```
#include <iostream>
using namespace std;
int main() {
    char ch = 'A';
    cout << ++ch;
    return 0;
}
```



20)

```
#include <iostream>
using namespace std;
int main() {
    char ch = 'A';
    cout << ch + 32;
    return 0;
}
```

21)

```
#include <iostream>
using namespace std;
int main() {
    char ch = 'N';
    cout << char(ch + 32);
    return 0;
}
```



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22)

```
#include <iostream>

using namespace std;

int main() {
    int x = 2;
    if (!x == 0) {
        cout << "Yes";
    } else {
        cout << "No";
    }
    return 0;
}
```

23)

```
#include <iostream>

using namespace std;

int main() {
    int x = 0;
    if (!x != 0 && x == 1 || !x) {
        cout << "Yes";
    } else {
        cout << "No";
    }
    return 0;
}
```



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24)

```
#include <iostream>

using namespace std;

int main() {
    int x = 0, y = 1;
    if (++x && --y) {
        cout << x << " " << y;
    } else {
        cout << x++ << " " << --y;
    }
    return 0;
}
```

25)

```
#include <iostream>

using namespace std;

int main() {
    bool ok = 0;
    if (!(ok) && ok != !ok) {
        cout << "Yes";
    } else {
        cout << "No";
    }
    return 0;
}
```



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26)

```
#include <iostream>

using namespace std;

int main() {
    int x = 0, y = 0;
    if (!(x++ == 0 || ++y == 0)) {
        x++;
    } else if (++x == y++) {
        y++;
    }
    if (x > y)
        y = x++;
    cout << x << " " << y;
    return 0;}
```

27)

```
#include <iostream>

using namespace std;

int main() {
    int x = 1, y = 2, mx = 0, mn = 100;
    if (x > mx)
        mx = x;
    else if (x < mn)
        mn = x;
    if (y > mx)
        mx = y;
    else if (y < mn)
        mn = y;
    cout << mx << " " << mn;}
```



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28)

```
#include <iostream>

using namespace std;

int main() {
    int x = 0, y = 0;
    if (x && ++y) {
        cout << "YES ";
    } else if (++x || y++) {
        cout << "NO ";
    }
    cout << x << " " << y;
}
```

29)

```
#include <iostream>

using namespace std;

int main() {
    char c = '0';
    int x = c;
    if (x % 2) {
        cout << "Even";
    } else {
        cout << "Odd";
    }
}
```



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30)

```
#include <iostream>

using namespace std;

int main() {
    char c = 67;
    if (c == 'c') {
        cout << "Yes";
    } else {
        cout << "No";
    }
}
```

31)

```
#include <iostream>

using namespace std;

int main() {
    int x = 15, y = 2;
    if (x++ % 2 == y % 2)
        x++;
    else if (!(x % 2 == y % 2))
        ++y;
    if (x % y)
        cout << "Yes";
    else
        cout << "No";
}
```




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32)

```
#include <iostream>

using namespace std;

int main() {

    int x = 70, n1 = 1, n2 = 100, n3 = 50;

    if (x >= n1 && x <= n2) {

        if (x >= n1 && x <= n2)

            cout << "Yes";

    } else {

        cout << "No";

    }

}
```

33)

```
#include <iostream>

using namespace std;

int main() {

    int x, y, z;

    x = 0, y = 1, z = 2;

    if (x < y < z == x) {

        cout << "True";

    } else {

        cout << "False";

    }

}
```



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Answers

1. Runtime error
2. (int)1e5
3. 1
4. [Explain](#)
5. Int : $2^{31} - 1$,long long : $2^{63} - 1$
6.
 - short :2
 - int :4
 - long long :8
 - float:4
 - double:8
 - char:1
 - bool:1
 - string :1byte for each character in it
7. 4 bytes
8. 4 bytes
9. 8
10. [The solution is on GitHub](#)
11.
 - 1) d.Overflow
 - 2) a. 20000000000
 - 3) 50\$60
 - 4) 17 26



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5) Right choice

6) Compilation error (the correct : `int a,b,c ; a=b=c=0;`)

7) hello world

Explanation: Since `std::cout<<"hello"` returns a reference to `std::cout`, therefore, the condition gets true, and the if block is executed.

8) 120

9) d. OneTwoThreeDefault

10) b. Bye

11) b. Five

12) Size of int is: 4

13) Size of char is: 1

Value of a is: R

14) Size of bool is: 1

Value of a is: 0 or Value of a is: 0 (garbage)

15) 36 6

16) 1

0

1

0

17) 0

1

1

18) 97



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- 19) B
- 20) 97
- 21) n
- 22) Yes
- 23) Yes
- 24) 1 -1
- 25) No
- 26) 3 2
- 27) 2 100
- 28) No 1 0
- 29) Odd
- 30) No
- 31) No
- 32) Yes
- 33) False