

Short circuit operator

=====

&&
||

These operators are exactly same as bitwise operators, but the difference is as follows

&,

=> Both the arguments will be evaluated
=> performance is low
=> Applicable for both boolean and integral types.

&&, ||
=====

=> Evaluation of second argument is optional
=> performance is high
=> Applicable only for boolean type, but not for integral type.

eg::

```
int x= 10,y=15;
if(++x < 10 && ++y>15) //x=11
    x++;
else
    y++; //y=16
```

```
System.out.println(x); //12
System.out.println(y); //16
```

```
case1::  || => x = 12,y=16
case2::  |  => x = 12,y=16
case3::  && => x = 11,y=16
case4::  &  => x = 11,y=17
```

eg::

```
int x=10;
if(++x<10 && ((x/0)<10))
    System.out.println("hello");
else
    System.out.println("hiee");
```

output:: hiee

case2: replace && with '&'

output:: java.lang.ArithmeticException:/ by zero

q>

```
Boolean b1 = true;
boolean b2 = false;
boolean b3 = true;
if ((b1 & b2) | (b2 & b3) & b3)
    System.out.print("alpha ");
if ((b1 = false) | (b1 & b3) | (b1 | b2))
    System.out.print("beta ");
```

What is the result?

- A. beta
- B. alpha
- C. alpha beta
- D. Compilation fails.
- E. No output is produced.
- F. An exception is thrown at runtime.

53.

```
1. class Maybe {
2.     public static void main(String[] args) {
3.         boolean b1 = true;
4.         boolean b2 = false;
5.         System.out.print(!false ^ false); //true
6.         System.out.print(" " + (!b1 & (b2 = true))); //false & true => false
7.         System.out.println(" " + (b2 ^ b1)); //true ^ true => false
8.     }
9. }
```

Which are true?

- A. Line 5 produces true.
- B. Line 5 produces false.
- C. Line 6 produces true.
- D. Line 6 produces false.
- E. Line 7 produces true.
- F. Line 7 produces false.

Answer :: A,D,F

Q>

Given.

```
class Foozit {
public static void main(String[] args) {
    Integer x = 0;
    Integer y = 0;
    for(Short z = 0; z < 5; z++)
        if((++x > 2) || (++y > 2))
            x++;
    System.out.println(x + " " + y);
}
}
```

What is the result?

- A. 5 1
- B. 5 2
- C. 5 3
- D. 8 1
- E. 8 2
- F. 8 3
- G. 10 2
- H. 10 3

Answer: E

Given

```
3. public class Spock {
4.     public static void main(String[] args) {
5.         int mask = 0;
6.         int count = 0;
7.         if( ((5<7) || (++count < 10)) | mask++ < 10 ) mask = mask + 1;
```

```

8.    if( (6 > 8) ^ false) mask = mask + 10;
9.    if(!(mask > 1) && ++count > 1) mask = mask + 100;
10.   System.out.println(mask + " " + count);
11.   }
12. }

```

Which two are true about the value of mask and the value of count at line 10?
(Choose two.)

- A. mask is 0
- B. mask is 1
- C. mask is 2
- D. mask is 10
- E. mask is greater than 10
- F. count is 0
- G. count is greater than 0

Answer:: C,F

Q>

What will be the result of compiling and executing Test class?

```

public class Test {
    public static void main(String[] args) {
        int a = 7;
        boolean res = a++ == 7 && ++a == 9 || a++ == 9;
        System.out.println("a = " + a);
        System.out.println("res = " + res);
    }
}

```

- A. a=10
res=true
- B. a=9
res=true
- C. a=10
res=false
- D. compilation error

Answer: B

Q>

```

public class SpecialOps {
    public static void main(String[] args) {
        String s = "";
        Boolean b1 = true;
        boolean b2 = false;
        if((b2 = false) | (21%5) > 2) s += "x";
        if(b1 || (b2 == true)) s += "y";
        if(b2 == true) s += "z";
        System.out.println(s);
    }
}

```

Which are true? (Choose all that apply.)

- A. Compilation fails
- B. x will be included in the output
- C. y will be included in the output
- D. z will be included in the output
- E. An exception is thrown at runtime

Conditional Operator

=====

?: (Ternary operator)

eg::

```
int x = (10>20) ? 30 : 40;  
System.out.println(x); //40
```

eg::

```
int x = (10>20) ? 30 : (100>20) ? 40 : 50;  
System.out.println(x); //40
```

eg::

```
int a = 10, b = 20;  
byte c1 = (10>20) ? 30 : 40; //40  
byte c2 = (10<20) ? 30 : 40; //30  
System.out.println(c1); //40  
System.out.println(c2); //30
```

eg::

```
int a = 10, b = 20;  
byte c1 = (a>b) ? 30 : 40; //CE  
byte c2 = (a<b) ? 30 : 40; //CE  
System.out.println(c1);  
System.out.println(c2);
```

Answer: Since value of a and value of b is not known, compiler can't keep true or false associated value in variable

by default those values will be treated as 'int', since 'int' can't be stored in byte it would result in "CompileTimeError".

55.

Given

```
class Hexy {  
    public static void main(String[] args) {  
        Integer i = 42;  
        String s = (i<40)? "life": (i>50) ? "universe" : "everything";  
        System.out.println(s);  
    }  
}
```

What is the result?

- A. null
- B. life
- C. universe
- D. everything
- E. Compilation fails.
- F. An exception is thrown at runtime.

Answer : D

Q>

For the given code what is the output?

```
int x=100;  
int a=x++;  
int b= ++x;  
int c= x++;  
int d= (a<b) ? (a<c) ? a: (b<c)? b: c :x;  
System.out.println(d);
```

- A. 100
- B. 101

- C. 102
- D. 103
- E. compilation fails

Answer:: A

Control statements

=====

1. if
2. else
3. switch
4. while
5. dowhile
6. for
7. foreach
9. break
10. continue
11. return
12. exit

Q>

Give

```
int i=10;
int j=20;
int k= (j+=i)/5;
System.out.println(i+" "+j+" "+k);
```

- A.10:30:6
- B.10:22:22
- C.10:22:20
- D.10:22:6

Answer : A

Q>

```
int x =10;
if(x){
    System.out.println("hello");
}else{
    System.out.println("hiee");
}
```

- A. hello
- B. hiee
- C. CompileTime Error
- D. Some problem by jvm at the execution
- E. None of the above

Answer: C

Q>

```
int x =10;
if(x=20){
    System.out.println("hello");
}else{
    System.out.println("hiee");
}
```

- A. hello
- B. hiee
- C. CompileTime Error

- D. Some problem by jvm at the execution
- E. None of the above

Answer: C

Q>
int x =10;
if(x==20){
 System.out.println("hello");
}else{
 System.out.println("hiee");
}
A. hello
B. hiee
C. CompileTime Error
D. Some problem by jvm at the execution
E. None of the above

Answer: B

Q>
boolean b= false;
if(b=true){
 System.out.println("hello");
}else{
 System.out.println("hiee");
}
A. hello
B. hiee
C. CompileTime Error
D. Some problem by jvm at the execution
E. None of the above
Answer: A

Q>
boolean b= false;
if(b==true){
 System.out.println("hello");
}else{
 System.out.println("hiee");
}
A. hello
B. hiee
C. CompileTime Error
D. Some problem by jvm at the execution
E. None of the above
Answer: B

Q>
if(true)
 System.out.println("hello");
A. Compile Time Error
B. hello
C. Some problem by jvm at the execution
D. None of the above

Answer: B

```
Q>.
public class Test{
    public static void main(String args[]){
        if(true);
    }
}
```

- A. Compile Time Error
- B. hello
- C. Some problem by jvm at the execution
- D. No Output

Answer: D

```
Q.
public class Test{
    public static void main(String args[]){
        if(true)
            int x=10;
    }
}
```

- A. Compile Time Error
- B. hello
- C. Some problem by jvm at the execution
- D. No Output

Answer: A

```
42.
public class Test{
    public static void main(String args[]){
        if(true) {
            int x=10;
        }
    }
}
```

- A. Compile Time Error
- B. hello
- C. Some problem by jvm at the execution
- D. No Output

Answer: D

```
Q.
public class Test{
    public static void main(String args[]){
        if(true)
            System.out.println("hello");
            System.out.println("hiee");
    }
}
```

How many statements are independent of if?

- A. 0-stmt
- B. 1-stmt
- C. 2-stmt
- D. 3-stmt

Answer:B

Q>

```
public class Test {  
    public static void main(String[] args) {  
        int i = 5;  
        System.out.print(i+++"");//5, i = 6  
        System.out.print(i+"");// 6  
        System.out.print(++i+"");//i=7  
        System.out.print(++i+i+++"");//i=8+8 i = 9  
    }  
}
```

Predict the Output?

A. 56716

B. 66616

C. 57817

D. 67817

Answer: A