

### Question 1

Not answered

Marked out of 1.00



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#### Question text

Here is part of a graphics program that simulates a color fading in the sun. The amount of red starts at the maximum of 1.0 and is faded by decreasing it by 1% each time the loop executes, until it is close to zero.

```
float redLevel = 1.0;
while ( _____ )
{
    redLevel = redLevel*0.99 ;

    // the new redLevel is used here in some graphics methods
}
```

Pick a condition for the while statement.

#### Question 1 Answer



a.  
`redLevel*redLevel < 1.0`



b.



c.  
`redLevel == 0.0`



d.  
`Math.abs( redLevel ) < 0.0`



e.  
`redLevel > 0.001`

Question **2**

Complete

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Question text

Which of the following is most likely to use a sentinel loop?

Question 2Answer



a.

Asking the user at the end of a game if the user wants to play again.



b.

Trying various letter substitution combinations until a message in a secret code can be read.



c.

Checking if a particular integer is even or odd.



d.

Checking that each price in a list of items offered for sale is less than \$125.

Question **3**

Complete

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Question text

Which of the following is most likely to use a counting loop?

Question 3Answer



a.

Asking the user at the end of a game if the user wants to play again.



b.

Checking if a particular integer is even or odd.



c.  
Checking that each price in a list of items offered for sale is less than \$125.

☐

d.  
Trying various letter substitution combinations until a message in a secret code can be read.

Question **4**

Complete

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Question text

What will be the output of the program?

```
int x = 3;
```

```
int y = 1;
```

```
if (x = y) /* Line 3 */
```

```
{
```

```
    System.out.println("x =" + x);
```

```
}
```

Question 4Answer

☒

a.  
The code runs with no output

☐

b.  
x = 3

☐

c.  
x = 1

☐

d.  
Compilation fails

Question **5**

Complete  
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### Question text

What will be the output of the program?

```
boolean bool = true;
if(bool = false) /* Line 2 */
{
    System.out.println("a");
}
else if(bool) /* Line 6 */
{
    System.out.println("b");
}
else if(!bool) /* Line 10 */
{
    System.out.println("c"); /* Line 12 */
}
else
{
    System.out.println("d");
}
```

Question 5Answer



a.  
b



b.



c.

a



d.

d



e.

c

### Question 6

Complete

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#### Question text

Given the following code:

```
public class TestSwitch {  
    public static void main(String args[]) {  
        byte b = -1;  
        switch (b) {  
            case -1:  
                System.out.print("-1");  
                break;  
            case 127:  
                System.out.print("127");  
                break;  
            case 128:  
                System.out.print("128");  
                break;  
            default:  
                System.out.print("Default ");  
        }  
    }  
}
```

What is the result of attempting to compile and run the program?

Question 6Answer

☐

a.  
Compile-time error

☐

b.  
Prints: Default

☒

c.  
Prints: -1

☐

d.

☐

e.  
Prints: 128

Question **7**

Complete

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Flag question

Question text

Choose the correct expressions which satisfy the given table for both X and Y

X Y Result

80 -97 true

95 65 true

63 -68 false

9 28 true

55 15 false

47 37 true

Question 7 Answer

☐

a.

`(x >= 10 ) && (y > 25)`

☐

b.

`(x >= 70 ) || (y > 25)`

☐

c.

`(x < 75 ) || (y > -100)`

☐

d.

`(x >= 70 ) || (y > 35)`

☐

e.

Question **8**

Complete

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Question text

Given the following,

11. `int l = 0;`

12. `outer:`

13. `while (true) {`

14. `l++;`

15. `inner:`

16. `for (int j = 0; j < 10; j++) {`

17. `l += j;`

18. `if (j == 3)`

19. `continue inner;`

20. `break outer;`

```
21. }  
22. continue outer;  
23. }  
24. System.out.println(l);  
25.  
26.
```

What is the result?

Question 8 Answer

☐

a.

☐

b.

4

☐

c.

2

☐

d.

3

☒

e.

1

Question 9

Complete

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☐

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Question text

Given the following:

```
public class DoTest {  
    public static void main(String[] args) {
```



```
boolean flag;  
int index = 3;  
do {  
    flag = false;  
    System.out.print(index);  
    index--;  
    flag = (index > 0);  
    continue;  
} while ((flag) ? true : false);  
}  
}
```

What will be the output of above code?

Question 9 Answer



a.

Will go into an infinite loop



b.

Compilation error



c.

3210



d.

321

Question **10**

Complete

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Question text

For the code snippet:

```
int m = 0;  
while( ++m < 2 )
```

```
System.out.println( m );
```

What is printed to standard output?

Question 10Answer

☐

a.

2

☐

b.

☒

c.

1

☐

d.

Nothing is printed

☐

e.

0

Question **11**

Complete

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☐

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Question text

What will be the output of the program?

```
int x = 3;
```

```
int y = 1;
```

```
if (x == y) /* Line 3 */
```

```
{
```

```
    System.out.println("x =" + x);
```

```
}
```

Question 11Answer



a.  
Compilation fails.



b.  
The code runs with no output.



c.  
x = 3



d.  
x = 1

Question **12**

Not answered

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Question text

Given the following,

```
1. class For {  
2.     public void test() {  
3.  
4.         System.out.println("x = " + x);  
5.     }  
6. }  
7. }
```

and the following output,

```
x = 0 x = 1
```

Which two lines of code (inserted independently) will cause this output?

Question 12Answer

☐

a.

for (int x = -1; x < 2; ++x) {

☐

b.

for (int x = 1; x < 3; ++x) {

☐

c.

☐

d.

for (int x = 0; x < 2; x++ ) {

☐

e.

for (int x = 0; x > 2; ++x) {

Question **13**

Complete

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Question text

Which of the following is a legal loop definition?

Question 13Answer

☐

a.

while (int a == 0) { /\* whatever \*/ }

☐

b.

do { /\* whatever \*/ } while (int a = 0);

☐

c.

do { /\* whatever \*/ } while (int a == 0);

☒

d.

for (int a=0; a<100; a++) { /\* whatever \*/ }



e.

#### Question **14**

Complete

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#### Question text

Given the following:

```
public class TestDoWhile {  
    public static void main(String... args) {  
        int count = 20;  
        do {  
            System.out.println(count);  
        } while (count++ < 21);  
    }  
}
```

What is the output?

Question 14Answer



a.

21



b.

20



c.

Nothing is printed



d.

20

21

#### Question **15**

Complete  
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Question text

```
switch(x)
{
    default:
        System.out.println("Hello");
}
```

Which two are acceptable types for x?

1 byte

2 long

3 char

4 float

5 short

6 long

Question 15Answer



a.  
2 and 4



b.  
3 and 5



c.  
1 and 3



d.  
4 and 6

Question **16**

Complete  
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Question text

```
public void test(int x)
{
    int odd = 1;
    if(odd) /* Line 4 */
    {
        System.out.println("odd");
    }
    else
    {
        System.out.println("even");
    }
}
```

Which statement is true?

Question 16 Answer



a.  
"odd" will always be output.



b.  
"odd" will be output for odd values of x, and "even" for even values.



c.  
Compilation fails.



d.  
"even" will always be output.



e.

Question **17**

Complete

Marked out of 1.00



Flag question

### Question text

Which of the following situation most likely does NOT call for a counting loop?

Question 17 Answer



a.

Adding up all the integers between zero and one hundred.



b.

Prompting the user of a program until the user responds with correct information.



c.

Writing out a table of Fahrenheit and Celcius temperature equivalents.



d.



e.

Making the computer beep ten times.

Question **18**

Complete

Marked out of 1.00



Flag question

### Question text

Given the following:

```
public class TestLoop {  
    public static void main(String... args) {  
        int index = 2;  
        while (--index > 0)  
            System.out.println(index);  
    }  
}
```

What is printed to standard output?



Question 18Answer

☐

a.  
Nothing is printed

☐

b.

☒

c.  
1

☐

d.  
0

☐

e.  
2

Question **19**

Complete

Marked out of 1.00

☐

Flag question

Question text

Given the following:

```
public class TestLoop {  
    public static void main(String... args) {  
        int index = 2;  
        while (index-- > 0)  
            System.out.println(index);  
    }  
}
```

What is printed to standard output?

Question 19Answer



a.

1

2



b.

1

0



c.

Nothing is printed



d.



e.

1

Question **20**

Complete

Marked out of 1.00



Flag question

Question text

What is the most common type of bug in software?

Question 20Answer



a.

The "off by one" problem, where a counting loop executes its body one time too many or one time too few.



b.

The "uninitialized variable" problem, where a variable is used in an expression before its contents have been initialized.



c.

The "wrong operator" problem, where an arithmetic expression does not mean what the programmer thought it did.



d.

The "wrong way" problem, where a two way decision is written incorrectly.

Question **21**

Complete

Marked out of 1.00



Flag question

Question text

What will be the output of the following program?

```
class IfExample
{
    public static void main(String s[])
    {
        if( 1 < 2 )
        {
            System.out.println("1 is less than 2");
        }
        else
            System.out.println("2 is less than 1");
        System.out.println("Hello From IfExample");

    }
}
```

Question 21 Answer



a.

1 is less than 2

Hello From IfExample



b.



c.

1 is less than 2



d.

Compilation Error



e.

2 is less than 1

Question **22**

Complete

Marked out of 1.00



Flag question

Question text

What is the output of the below program?

```
public class Output {  
    public static void main(String[] args) {  
        int x, y = 1;  
        x = 10;  
        if (x != 10 && x / 0 == 0)  
  
            System.out.println    ;  
        else  
            System.out.println(++y);  
    }  
}
```

Question 22Answer



a.  
Compilation error

☐

b.  
1

☐

c.  
2

☐

d.  
Runtime error owing to division by zero in if condition

Question **23**

Complete

Marked out of 1.00

☐

Flag question

Question text

Given the following code:

```
1. public class Test1
2. {
3.     public static void main(String[] args)
4.     {
5.         int i=0;
6.         while(i)
7.         {
8.             if(i==4) break;
9.             i++;
10.        }
11.    }
12. }
```

What will be the value of i at line 11?

Question 23Answer

☐

a.

0



b.

The code will not compile



c.

5



d.

4

Question **24**

Complete

Marked out of 1.00



Flag question

Question text

Choose the correct expressions which satisfy the given table for X

X Result

-68 true

-31 false

-70 true

-60 false

Question 24Answer



a.

$x \neq -31$



b.

$x < -60$



c.

$x > -50$



d.

$x > 0$

Question **25**

Complete

Marked out of 1.00



Flag question

Question text

Given the following:

```
public class TestLoop2 {  
    public static void main(String... args) {  
        int count = 10;  
        while (count++ < 11)  
            System.out.println(count);  
    }  
}
```

What is the output?

Question 25Answer



a.

10



b.

11



c.

Nothing is printed



d.

10

11

Question **26**

Complete

Marked out of 1.00



Flag question

Question text

Given:

```
switch( i)
{
    default :
        System.out.println("Hello");
}
```

What is the acceptable type for the variable i?

Question 26 Answer

☐

a.  
float

☒

b.  
byte

☐

c.  
double

☐

d.  
Object

Question **27**

Complete

Marked out of 1.00

☐

Flag question

Question text

Examine the following code fragment:

```
int j = 1;
while ( j < 10 )
{
    System.out.println(j + " ");
    j = j + j%3;
}
```



What is output to the monitor?

Question 27 Answer

☐

a.  
1 4 7 10

☒

b.  
1 2 4 5 7 8

☐

c.  
1 4 7

☐

d.  
1 2 5 8

☐

e.

Question **28**

Complete

Marked out of 1.00

☐

Flag question

Question text

Given the following:

```
public class TestIfBoolean {  
    public static void main(String[] args) {  
        Boolean bFlag = null;  
        if (bFlag) {  
            System.out.print("A");  
        } else if (bFlag == false) {  
            System.out.print("B");  
        } else {  
            System.out.print("C");  
        }  
    }  
}
```

```
}  
}  
}
```

What is the expected output?

Question 28Answer

☐

a.

B

☐

b.

C

☐

c.

A

☒

d.

java.lang.NullPointerException is thrown at runtime

Question **29**

Complete

Marked out of 1.00

☐

Flag question

Question text

Given the following,

1. int j = 7;

2. label:

3. if (j > 5) {

4.     System.out.print(" j is " + j);

5.     j--;

6.     continue label;

7. }

What is the result?

Question 29Answer



a.  
j is 7 j is 6



b.



c.  
Produces no output



d.  
j is 7



e.  
Compilation fails

Question **30**

Complete

Marked out of 1.00



Flag question

Question text

```
public void test(int x)
{
    int odd = 1;
    if(odd) /* Line 4 */
    {
        System.out.println("odd");
    }
    else
    {
        System.out.println("even");
    }
}
```

Which statement is true?

Choose the correct answer(s) from the following:

Question 30 Answer

☐

a.

"even" will always be output.

☐

b.

Compilation fails.

☐

c.

"odd" will be output for odd values of x, and "even" for even values.

☐

d.

☒

e.

"odd" will always be output.

Question **31**

Complete

Marked out of 1.00

☐

Flag question

Question text

Which option completes the code to print the message as long as number is greater than 20?

```
int number = 100;
```

```
MISSING CODE {
```

```
    System.out.println("The number = " + number);
```

```
    number --;
```

```
}
```

Question 31 Answer

☐

a.  
do while (number > 20)

☐

b.  
if (number > 20)

☐

c.  
for (number > 20)

☒

d.  
while (number > 20)

☐

e.

Question **32**

Complete

Marked out of 1.00

☐

Flag question

Question text

Assume that val has been defined as an int for the code below:

```
if (val > 4) {  
    System.out.println("Test A");  
} else if (val > 9) {  
    System.out.println("Test B");  
} else  
    System.out.println("Test C");
```

Which values of val will result in "Test C" NOT being printed?

Question 32Answer

☐

a.  
val < 0

☐

b.

val = 0



c.



d.

$4 < \text{val} < 9$



e.

$0 < \text{val} < 4$

Question **33**

Not answered

Marked out of 1.00



Flag question

Question text

```
public void foo( boolean a, boolean b)
{
    if( a )
    {
        System.out.println("A"); /* Line 5 */
    }
    else if(a && b) /* Line 7 */
    {
        System.out.println( "A && B");
    }
    else /* Line 11 */
    {
        if ( !b )
        {
            System.out.println( "notB" );
        }
        else
```

```
{  
    System.out.println( "ELSE" );  
}  
}
```

Choose the correct answer(s) from the following:

Question 33Answer

☐

a.

If a is false and b is true then the output is "ELSE"

☐

b.

If a is false and b is false then the output is "ELSE"

☐

c.

If a is true and b is true then the output is "A && B"

☐

d.

If a is true and b is false then the output is "notB"

Question **34**

Complete

Marked out of 1.00

☐

Flag question

Question text

What is the output of the below program?

```
public class IfExample {  
    public static void main(String[] args) {  
        int var1;  
        if (var1) {  
            System.out.println("Inside If Condition");  
        }  
    }  
}
```

Question 34Answer



a.  
Runtime error



b.  
Inside If Condition



c.  
Compilation error



d.  
Successfully compiled

Question **35**

Complete

Marked out of 1.00



Flag question

Question text

Which flow control mechanism determines when a block of code should run more than once?

Question 35 Answer



a.  
sequence



b.



c.  
exceptions



d.  
iteration



e.  
selection



