

**Flow control Part-1****Q: 01 Given:**

```
10. public class Bar {  
11. static void foo( int... x ) {  
12. // insert code here  
13. }  
14. }
```

Which two code fragments, inserted independently at line 12, will allow the class to compile? (Choose two.)

- A. `foreach( x ) System.out.println(z);`
- B. `for( int z : x ) System.out.println(z);`
- C. `while( x.hasNext() ) System.out.println( x.next() );`
- D. `for( int i=0; i< x.length; i++ ) System.out.println(x[i]);`

**Q: 02 Click the Task button.**

Place the correct Code in the Code Sample to achieve the expected results.

**Expected Results**

Output: 1 2 4 8 16 32

**Code Sample**

```
int [] y = { 1, 2, 4, 8, 16, 32 };  
System.out.print("Output: ");
```

Place here

```
System.out.print(x);  
System.out.print(" ");  
}
```

**Code**

```
for(int x : y) {  
for(int x = y[]) {  
foreach (y as x) {  
foreach (int x : y) {  
for(int x=1; x=y[]; x++) {
```

**Q: 03 Given:**

```
25. int x = 12;  
26. while (x < 10) {  
27. x--;  
28. }  
29. System.out.print(x);
```

**What is the result?**

- A. 0
- B. 10
- C. 12
- D. Line 29 will never be reached.

**Q: 04 Given:**

```
11. public static void main(String[] args) {  
12. Object obj = new int[] { 1, 2, 3 };  
13. int[] someArray = (int[])obj;  
14. for (int i : someArray) System.out.print(i + " ");  
15. }
```

**What is the result?**

- A. 1 2 3
- B. Compilation fails because of an error in line 12.
- C. Compilation fails because of an error in line 13.
- D. Compilation fails because of an error in line 14.
- E. A ClassCastException is thrown at runtime.

**Q: 05 Given:**

```
11. public static void main(String[] args) {  
12. for (int i = 0; i <= 10; i++) {  
13. if (i > 6) break;  
14. }  
15. System.out.println(i);  
16. }
```

**What is the result?**

- A. 6
- B. 7
- C. 10
- D. 11
- E. Compilation fails.
- F. An exception is thrown at runtime.

**Q: 06 Given:**

```
11. public static void main(String[] args) {  
12. Integer i = new Integer(1) + new Integer(2);  
13. switch(i) {  
14. case 3: System.out.println("three"); break;  
15. default: System.out.println("other"); break;  
16. }  
17. }
```

**What is the result?**

- A. three
- B. other
- C. An exception is thrown at runtime.
- D. Compilation fails because of an error on line 12.
- E. Compilation fails because of an error on line 13.
- F. Compilation fails because of an error on line 15.

**Q: 07 Given:**

```
10. public class ClassA {  
11. public void count(int i) {  
12. count(++i);  
13. }  
14. }
```

**And:**

```
20. ClassA a = new ClassA();  
21. a.count(3);
```

**Which exception or error should be thrown by the virtual machine?**

- A. StackOverflowError
- B. NullPointerException
- C. NumberFormatException
- D. IllegalArgumentException
- E. ExceptionInInitializerError

**Q: 08 Given:**

```
35. int x = 10;  
36. do { 37. x--;  
38. } while (x < 10);
```

**How many times will line 37 be executed?**

- A. ten times
- B. zero times

- C. one to nine times
- D. more than ten times

**9. Given the following code:**

```
public class OrtegorumFunction {
public int computeDiscontinuous(int x) {
int r = 1;
r += x;
if ((x > 4) && (x < 10)) {
r += 2 * x;
} else (x <= 4) {
r += 3 * x;
} else {
r += 4 * x;
}
r += 5 * x;
return r;
}
public static void main(String [] args) {
OrtegorumFunction o = new OrtegorumFunction();
System.out.println("OF(11) is: " + o.computeDiscontinuous(11));
}
}
```

**What is the result?**

- A. OF(11) is: 45
- B. OF(11) is: 56
- C. OF(11) is: 89
- D. OF(11) is: 111
- E. Compilation fails.
- F. An exception is thrown at runtime.

**10. Given:**

```
1. class Crivitch {
2. public static void main(String [] args) {
3. int x = 0;
4. // insert code here
5. do { } while (x++ < y);
6. System.out.println(x);
7. }
8. }
```

**Which, inserted at line 4, produces the output 12?**

- A. `int y = x;`
- B. `int y = 10;`
- C. `int y = 11;`
- D. `int y = 12;`
- E. `int y = 13;`
- F. None of the above will allow compilation to succeed.

11. Given:

```
class Swill {  
    public static void main(String[] args) {  
        String s = "-";  
        switch(TimeZone.CST) {  
            case EST: s += "e";  
            case CST: s += "c";  
            case MST: s += "m";  
            default: s += "X";  
            case PST: s += "p";  
        }  
        System.out.println(s);  
    }  
}  
enum TimeZone {EST, CST, MST, PST }
```

What is the result?

- A. -c
- B. -X
- C. -cm
- D. -cmp
- E. -cmXp
- F. Compilation fails.
- G. An exception is thrown at runtime.

12. Given:

```
class Circus {  
    public static void main(String[] args) {  
        int x = 9;  
        int y = 6;  
        for(int z = 0; z < 6; z++, y--) {  
            if(x > 2) x--;  
            label:  
            if(x > 5) {
```

```
System.out.print(x + " ");
--x;
continue label;
}
x--;
}
}
}
```

**What is the result?**

- A. 8
- B. 8 7
- C. 8 7 6
- D. Compilation fails.
- E. An exception is thrown at runtime.

**13. Given:**

```
1. class Loopy {
2. public static void main(String[] args) {
3. int[] x = {7,6,5,4,3,2,1};
4. // insert code here
5. System.out.print(y + " ");
6. }
7. } }
```

**Which, inserted independently at line 4, compiles? (Choose all that apply.)**

- A. for(int y : x) {
- B. for(x : int y) {
- C. int y = 0; for(y : x) {
- D. for(int y=0, z=0; z<x.length; z++) { y = x[z];
- E. for(int y=0, int z=0; z<x.length; z++) { y = x[z];
- F. int y = 0; for(int z=0; z<x.length; z++) { y = x[z];

**14. Given:**

```
1. class Ring {
2. final static int x2 = 7;
3. final static Integer x4 = 8;
4. public static void main(String[] args) {
5. Integer x1 = 5;
6. String s = "a";
7. if(x1 < 9) s += "b";
8. switch(x1) {
```

```
9. case 5: s += "c";
10. case x2: s += "d";
11. case x4: s += "e";
12. }
13. System.out.println(s);
14. }
15. }
```

**What is the result?**

- A. abc
- B. abcde
- C. Compilation fails due only to an error on line 7.
- D. Compilation fails due only to an error on line 8.
- E. Compilation fails due only to an error on line 10.
- F. Compilation fails due only to an error on line 11.
- G. Compilation fails due to errors on multiple lines.

## **Part-2**

1)

```
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" ); }
    } } }
```

- A. If a is true and b is true then the output is "A && B"
- B. If a is true and b is false then the output is "notB"
- C. If a is false and b is true then the output is "ELSE"
- D. If a is false and b is false then the output is "ELSE"

2)

What will be the output of the program?

```
int i = 1, j = -1;
```

```
switch (i)
{
    case 0, 1: j = 1; /* Line 4 */
    case 2: j = 2;
    default: j = 0;
}
System.out.println("j = " + j);
```

- A. j = -1
- B. j = 0
- C. j = 1
- D. Compilation fails.

3)

What will be the output of the program?

```
public class Switch2
{
    final static short x = 2;
    public static int y = 0;
    public static void main(String [] args)
    {
        for (int z=0; z < 3; z++)
        {
            switch (z)
            {
                case x: System.out.print("0 ");
                case x-1: System.out.print("1 ");
                case x-2: System.out.print("2 ");
            }
        }
    }
}
```

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



4)

```
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?

- A. Compilation fails.
- B. "odd" will always be output.
- C. "even" will always be output.
- D. "odd" will be output for odd values of x, and "even" for even values.

5)

```
public class While
{
    public void loop()
    {
        int x= 0;
        while ( 1 ) /* Line 6 */
        {
            System.out.print("x plus one is " + (x + 1)); /* Line 8 */
        }
    }
}
```

- A. There is a syntax error on line 1.
- B. There are syntax errors on lines 1 and 6
- C. There are syntax errors on lines 1, 6, and 8.
- D. There is a syntax error on line 6.

6)

What will be the output of the program?

```
int i = 1, j = 10;
do
{
    if(i > j)
    {
        break;
    }
    j--;
} while (++i < 5);
System.out.println("i = " + i + " and j = " + j);
```

- A. i = 6 and j = 5
- B. i = 5 and j = 5
- C. i = 6 and j = 4
- D. i = 5 and j = 6

7)

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");
}
```

```
}
```

- A. a
- B. b
- C. c
- D. d

8)

What will be the output of the program?

```
public class If1
{
    static boolean b;
    public static void main(String [] args)
    {
        short hand = 42;
        if ( hand < 50 & !b ) /* Line 7 */
            hand++;
        if ( hand > 50 ); /* Line 9 */
        else if ( hand > 40 )
        {
            hand += 7;
            hand++;
        }
        else
            --hand;
        System.out.println(hand);
    }
}
```

- A. 41
- B. 42
- C. 50
- D. 51

**9)**

What will be the output of the program?

```
for (int i = 0; i < 4; i += 2)
{
    System.out.print(i + " ");
}
System.out.println(i); /* Line 5 */
```

- A. 0 2 4
- B. 0 2 4 5
- C. 0 1 2 3 4
- D. Compilation fails.

**10)**

What will be the output of the program?

```
public class Delta
{
    static boolean foo(char c)
    {
        System.out.print(c);
        return true;
    }
    public static void main( String[] argv )
    {
        int i = 0;
        for (foo('A'); foo('B') && (i < 2); foo('C'))
        {
            i++;
            foo('D');
        }
    }
}
```

- A. ABDCBDCB
- B. ABCDABCD
- C. Compilation fails
- D. An exception is thrown at runtime.

**Part-3**

1) What will be the output of the program?

```
for(int i = 0; i < 3; i++)
{
    switch(i)
    {
        case 0: break;
        case 1: System.out.print("one ");
        case 2: System.out.print("two ");
        case 3: System.out.print("three ");
    }
}
System.out.println("done");
```

- A. done
- B. one two done
- C. one two three done
- D. one two three two three done

2)

What will be the output of the program?

```
public class Switch2
{
    final static short x = 2;
    public static int y = 0;
    public static void main(String [] args)
    {
        for (int z=0; z < 4; z++)
        {
            switch (z)
            {
                case x: System.out.print("0 ");
                default: System.out.print("def ");
                case x-1: System.out.print("1 ");
                    break;
                case x-2: System.out.print("2 ");
            } } } }
```

- A. 0 def 1
- B. 2 1 0 def 1
- C. 2 1 0 def def

D. 2 1 0 def 1 def 1

3)

```
public class Outer
{
    public void someOuterMethod()
    {
        //Line 5
    }
    public class Inner { }

    public static void main(String[] argv)
    {
        Outer ot = new Outer();
        //Line 10
    }
}
```

Which of the following code fragments inserted, will allow to compile?

- A. new Inner(); //At line 5
- B. new Inner(); //At line 10
- C. new ot.Inner(); //At line 10
- D. new Outer.Inner(); //At line 10

4)

What will be the output of the program?

```
Float f = new Float("12");
switch (f)
{
    case 12: System.out.println("Twelve");
    case 0: System.out.println("Zero");
    default: System.out.println("Default");
}
```

- A. Zero
- B. Twelve

- C. Default
- D. Compilation fails

5)

```
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?

- A. Compilation fails.
- B. "odd" will always be output.
- C. "even" will always be output.
- D. "odd" will be output for odd values of x, and "even" for even values.

6)

What will be the output of the program?

```
public class Switch2
{
    final static short x = 2;
    public static int y = 0;
    public static void main(String [] args)
    {
        for (int z=0; z < 3; z++)
        {
            switch (z)
            {
                case y: System.out.print("0 "); /* Line 11 */
            }
        }
    }
}
```

```
        case x-1: System.out.print("1 "); /* Line 12 */
        case x: System.out.print("2 "); /* Line 13 */
    }
}
}
```

- A. 0 1 2
- B. 0 1 2 1 2 2
- C. Compilation fails at line 11.
- D. Compilation fails at line 12.

7)

What will be the output of the program?

```
int x = 1, y = 6;
while (y-->0)
{
    x++;
}
System.out.println("x = " + x + " y = " + y);
```

- A. x = 6 y = 0
- B. x = 7 y = 0
- C. x = 6 y = -1
- D. Compilation fails.

8)

```
public class While
{
    public void loop()
    {
        int x= 0;
        while ( 1 ) /* Line 6 */
        {
            System.out.print("x plus one is " + (x + 1)); /* Line 8 */
        }
    }
}
```



```
}
```

Which statement is true?

- A. There is a syntax error on line 1.
- B. There are syntax errors on lines 1 and 6.
- C. There are syntax errors on lines 1, 6, and 8.
- D. There is a syntax error on line 6

9)

What will be the output of the program?

```
public class Test
{
    public static void main(String [] args)
    {
        int I = 1;
        do while ( I < 1 )
        System.out.print("I is " + I);
        while ( I > 1 ) ;
    }
}
```

- A. I is 1
- B. I is 1 I is 1
- C. No output is produced
- D. Compilation error

10)

What will be the output of the program?

```
int x = 3;
int y = 1;
if (x = y) /* Line 3 */
{
    System.out.println("x =" + x);
}
```

- A. x=1
- B. x=3
- C. Compilation fails.
- D. The code runs with no output.

**11)** Here is the hierarchy of exceptions related to array index and string index errors:  
Exception

- +-- RuntimeException
- +-- IndexOutOfBoundsException
- +-- ArrayIndexOutOfBoundsException
- +-- StringIndexOutOfBoundsException

Suppose you had a method X that could throw both array index and string index exceptions. Assuming that X does not have any try-catch statements, which of the following statements are correct?

- (a) The declaration for X must include “throws ArrayIndexOutOfBoundsException, StringIndexOutOfBoundsException”.
- (b) If a method calling X catches IndexOutOfBoundsException, both array and string index exceptions will be caught.
- (c) If the declaration for X includes “throws IndexOutOfBoundsException”, any calling method must use a try-catch block.
- (d) The declaration for X does not have to mention exceptions.

**12)** Which will be the first line to cause an error in the following code?

Select one correct answer.

```
1 class Char
2 {
3 public static void main(String arg[])
4 {
5 while(false)
6 {
7 System.out.println("Hello");
8 }
9 while(false)
10 {
11 }
12 do;
13 while(false);
14 do
15 {
16 ;
```

```
17 }
18 while(false);
19 }
20 }
```

- (a) Line no. 5
  - (b) Line no. 9
  - (c) Line no. 12
  - (d) Line no. 16
- 

**13)**

What will be the result of compiling and running the given program?

Select one correct answer.

```
1 public class exception
2 {
3 public static void main(String args[])
4 {
5 System.out.println("A");
6 try
7 {
8 }
9 catch(java.io.IOException t)
10 {
11 System.out.println("B");
12 }
13 System.out.println("C");
14 }
15 }
```

- (a) Compile time error.
- (b) Program compiles correctly and prints "A" when executed.
- (c) Program compiles correctly and prints "A" and "C" when executed.
- (d) Run time error.

**14.** What will be the result of compiling and running the given program?

Select one correct answer.

```
1 public class exception
2 {
3 public static void main(String args[])
4 {
5 System.out.println("A");
6 try
```

```
7 {
8 return;
9 }
10 catch(Exception e)
11 {
12 System.out.println("B");
13 }
14 System.out.println("C");
15 }
16 }
```

- (a) Compile time error in line no. 8 as main() method is declared void.
- (b) Program compiles correctly and prints "A" when executed.
- (c) Program compiles correctly and prints "A" and "C" when executed.
- (d) Compile time error at line no.14 due to statement not reached.

**15.** What will be the result of compiling and running the given program?

Select one correct answer.

```
1 public class exception
2 {
3 public static void main(String args[])
4 {
5 System.out.println("A");
6 try
7 {
8 return;
9 }
10 catch(Exception e)
11 {
12 System.out.println("B");
13 }
14 finally
15 {
16 System.out.println("C");
17 }
18 }
19 }
```

- (a) Compile time error in line no. 8 as main() method is declared void.
- (b) Program compiles correctly and prints "A" when executed.
- (c) Program compiles correctly and prints "A" and "C" when executed.
- (d) Program compiles correctly and prints "A", "B" and "C" when executed.

**16.** What will be the result of compiling and running the given program?

Select one correct answer.

```
1 public class exception
2 {
3 public static void main(String args[])
4 {
5 System.out.println("A");
6 try
7 {
8 System.out.println("B");
9 System.exit(0);
9 }
10 catch(Exception e)
11 {
12 System.out.println("C");
13 }
14 finally
15 {
16 System.out.println("D");
17 }
18 }
19 }
```

- (a) Program compiles correctly and prints "A" when executed.
- (b) Program compiles correctly and prints "A" and "B" when executed.
- (c) Program compiles correctly and prints "A" and "C" when executed.
- (d) Program compiles correctly and prints "A", "B" and "C" when executed.