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★ Exam in Session

Question 3 / 20

What is the expected output?

```
01. public class OuterTest {
02.
03.     public static void main(String args[]) {
04.         Airplane.BlackBox box = new Airplane().new BlackBox(); // line 1
05.         box.printVariables();
06.
07.     }
08. }
09.
10. class Airplane {
11.     String code = "11";
12.
13.     class BlackBox {
14.         String code = "22";
15.
16.         public void printVariables() {
17.             System.out.print(code);
18.             System.out.print(Airplane.this.code); // line 20
19.
20.         }
21.     }
22.
23. }
```

- Compile error because of line 1 (incorrect instantiation)
- Compile error because of line 20 (can't access Airplane's variables)
- 2222
- 1111
- 2211

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1. Chapter: Java Programming Language

Chapter Description and Objectives

1. Strings

Exam Category Description and Objectives

1.1.1. Java objects comparison

What is the expected output?

```
public static void main(String[] args) {  
    boolean stmt1 = "champ" == "champ";  
    boolean stmt2 = new String("champ") == "champ";  
    boolean stmt3 = new String("champ") == new String("champ");  
    System.out.println(stmt1 && stmt2 || stmt3);  
}
```

Please choose only one answer:

- true
- false

Check this Question online on JavaChamp.com: [Java objects comparison](#)

1.1.2. How to compare java objects?

What is the expected output?

```
public static void main(String[] args) {  
    boolean stmt1 = "champ" == "champ";  
    boolean stmt2 = new String("champ").equals(new String("champ"));  
    boolean stmt3 = "champ".toString()=="champ";  
  
    System.out.println(stmt1 && stmt2 && stmt3);  
}
```

Please choose only one answer:

- true
- false

Check this Question online on JavaChamp.com: [How to compare java objects?](https://www.javachamp.com/question/how-to-compare-java-objects/)

1.1.3. What are common methods between String and StringBuffer?

Select the common methods, which are defined for both type String and type StringBuffer ?

Please choose all the answers that apply:

- toString()
- length()
- append(String)
- trim()
- equals(Object)

Check this Question online on JavaChamp.com: [What are common methods between String and StringBuffer?](#)

1.1.4. What is the difference between String and StringBuffer?

Which of the statements would evaluate to true?

```
public class Tester {  
    public static void main(String[] args) {  
        StringBuffer sb = new StringBuffer("javachamp");  
        String s = new String("javachamp");  
        boolean stmt1 = s.equals(sb) ;  
        boolean stmt2 = sb.equals(s) ;  
        boolean stmt3 = sb.toString() == s ;  
        boolean stmt4 = sb.toString().equals(s) ;  
        boolean stmt5 = s.equals(sb.toString()) ;  
    }  
}
```

Please choose all the answers that apply:

- stmt1
- stmt2
- stmt3
- stmt4
- stmt5

Check this Question online on JavaChamp.com: [What is the difference between String and StringBuffer?](#)

1.1.5. Comparing String and StringBuffer in java

Which of the statements would evaluate to true?

```
public class Tester {  
    public static void main(String[] args) {  
        StringBuffer sb1 = new StringBuffer("javachamp");  
        StringBuffer sb2 = new StringBuffer("javachamp");  
  
        boolean stmt1 =sb1.equals(sb2) ;  
        boolean stmt2 = sb1 == sb2;  
  
        String s1 = new String("javachamp");  
        String s2 = new String("javachamp");  
  
        boolean stmt3 = s1.equals(s2);  
        boolean stmt4 = s1 == s2;  
  
    }  
}
```

Please choose all the answers that apply:

- stmt1
- stmt2
- stmt3
- stmt4

Check this Question online on JavaChamp.com: [Comparing String and StringBuffer in java](#)

1.1.6. Concatenating String and null

What is the expected output?

```
public static void main(String args []) {  
    String stmt = null;  
        System.out.print(null+stmt);  
        System.out.print(stmt+null);  
}
```

Please choose only one answer:

- RuntimeException is thrown because of the first print statement
- RuntimeException is thrown because of the second print statement
- nullnullnullnull
- nullnull
- compilation error

Check this Question online on JavaChamp.com: [Concatenating String and null](#)

1.1.7. Comparing StringBuffer using equals in java

What is the result of compiling and running the following code?

```
public static void main(String[] args) {
    StringBuffer buffer1 = new StringBuffer("javachamp");
    StringBuffer buffer2 = new StringBuffer(buffer1);
    if (buffer1.equals(buffer2))
        System.out.println("true");
    else
        System.out.println("false");
}
```

Please choose only one answer:

- true
- false

Check this Question online on JavaChamp.com: [Comparing StringBuffer using equals in java](#)

1.1.8. comparing null to String

What is the result of compiling and running the following code?

```
public static void main(String[] args) {  
    String s1 = null;  
    String s2 = null;  
  
    if (s1 == s2)  
        System.out.print("A");  
  
    if (s1.equals(s2))  
        System.out.print("B");  
}
```

Please choose only one answer:

- "AB" will be printed
- "A" will be printed followed by a NullPointerException thrown
- "B" will be printed
- No output is produced

Check this Question online on JavaChamp.com: [comparing null to String](#)

1.1.9. Methods of java regex Pattern?

Which of the following methods can be invoked by an object of Pattern class?

Please choose all the answers that apply:

- compile
- matches
- group
- toString

Check this Question online on JavaChamp.com: [Methods of java regex Pattern?](#)

1.1.10. Comparing Strings for equality in java

What is the result of compiling and running the following program?

```
public class Tester {  
    public static void main(String[] args) {  
        String a = "javachamp";  
        String b = "javachamp";  
        String c = new String("javachamp");  
  
        System.out.print(a==b);  
        System.out.print(a==c);  
        System.out.print(b.equals(c));  
        System.out.print(b.equals(a));  
    }  
}
```

Please choose only one answer:

- Compilation error
- falsefalsetrue
- true>true>true
- truefalse>true

Check this Question online on JavaChamp.com: [Comparing Strings for equality in java](#)

1.1.11. how to split String in java?

What is the result of compiling and running the following code?

```
public class Tester {  
  
    public static void main(String[] args) {  
        String stmt = "JavaChamp is here to help you";  
        for (String token : stmt.split("//s")) {  
            System.out.print(token + " ");  
        }  
    }  
}
```

Please choose only one answer:

- JavaChamp is here to help you
- JavaChamp i here to help you
- No output is produced
- Compilation error

Check this Question online on JavaChamp.com: [how to split String in java?](#)

1.1.12. How to parse String in java?

Given the following code, what is the expected output?

```
import java.util.regex.Matcher;
import java.util.regex.Pattern;

public class Tester {

    public static void main(String[] args) {
        Pattern p = Pattern.compile("[a-f]\\d+");
        Matcher m = p.matcher("ab34ef0");
        while(m.find()) {
            System.out.print(m.start()+ " "+m.group());
        }
    }
}
```

Please choose only one answer:

- 0 ab345 f0
- 0 ab344 ef0
- 1 b35 f0
- 1 b345 f0

Check this Question online on JavaChamp.com: [How to parse String in java?](#)

1.1.13. How to use StringBuffer in java?

What is the result of compiling and running the following code?

```
public class Tester {  
    public static void main(String[] args) {  
        String s = "";  
        Integer x = 5;  
        StringBuffer sb = new StringBuffer();  
        if (x < 15)  
            s.concat("javachamp");  
        else  
            sb.append("javachamp");  
        System.out.print(s + sb);  
    }  
}
```

Please choose only one answer:

- javachamp
- javachamp javachamp
- No output is produced
- Compilation error

Check this Question online on JavaChamp.com: [How to use StringBuffer in java?](#)

1.1.14. How to use java StringBuffer?

What is the result of compiling and running the following code?

```
public class Tester {  
    public static void main(String[] args) {  
        String s = "";  
        Integer x = 5;  
        StringBuffer sb = "";  
        if (x < 0)  
            s.concat("javachamp");  
        else  
            sb.append("javachamp");  
        System.out.print(s + sb);  
    }  
}
```

Please choose only one answer:

- javachamp
- javachamp javachamp
- No output is produced
- Compilation error

Check this Question online on JavaChamp.com: [How to use java StringBuffer?](#)

1.1.15. How to use java.util.Scanner?

What is the result of compiling and running the following code?

```
import java.util.Scanner;

public class Tester {

    public static void main(String[] args) {
        Scanner sc = new Scanner("javachamp 2009, true 239");
        while (sc.hasNext()) {

            if (sc.hasNextBoolean())
                System.out.print("Boolean");
            if (sc.hasNextInt())
                System.out.print("Int");
            sc.next();
        }
    }
}
```

Please choose only one answer:

- IntBooleanInt
- BooleanInt
- IntInt
- Compilation error

Check this Question online on JavaChamp.com: [How to use java.util.Scanner?](#)

1.1.16. What are java StringBuffer methods?

What is the result of compiling and running the following code?

```
public class Tester {  
  
    public static void main(String[] args) {  
        String str = "java";  
        StringBuffer sb = new StringBuffer("javachamp");  
        sb.insert(9, ".com");  
        str.concat("champ");  
        if (sb.length() < 6 || str.equals("javachamp")) {  
            System.out.print(sb);  
        }  
        sb.delete(2, 7);  
        System.out.print(sb);  
    }  
}
```

Please choose only one answer:

- javachamp.comjamp.com
- jamp
- jamp.com
- javachampjamp
- jap

Check this Question online on JavaChamp.com: [What are java StringBuffer methods?](#)

2. Constructors

Exam Category Description and Objectives

1.2.1. Can java constructors be declared static?

Can a constructor be declared static?

Please choose only one answer:

- Yes
- No

Check this Question online on JavaChamp.com: [Can java constructors be declared static?](#)

1.2.2. What are java constructors legal modifiers?

What are the legal modifiers which the constructor can be declared with?

Please choose all the answers that apply:

- public
- protected
- private
- final
- static
- abstract

Check this Question online on JavaChamp.com: [What are java constructors legal modifiers?](#)

1.2.3. Can java constructors be declared final?

What is the expected output?

```
public class Profile {  
  
    private Profile(int w) { // line 1  
        System.out.println(w);  
    }  
  
    public final Profile() { // line 5  
        System.out.println(10);  
    }  
  
    public static void main(String args[]) {  
        Profile obj = new Profile(50);  
    }  
}
```

Please choose only one answer:

- Won't compile because of line (1) – constructor can't be private
- Won't compile because of line (5) – constructor can't be final
- 50
- 10
- 50

Check this Question online on JavaChamp.com: [Can java constructors be declared final?](#)

1.2.4. Can java constructors be marked static?

What is the expected output?

```
public class Profile {  
    private Profile(int w) { // line 1  
        System.out.println(w);  
    }  
  
    public static Profile() { // line 5  
        System.out.println(10);  
    }  
  
    public static void main(String args[]) {  
        Profile obj = new Profile(50);  
    }  
}
```

Please choose only one answer:

- Won't compile because of line (1) – constructor can't be private
- 10
- 50
- 50
- Won't compile because of line (5) – constructor can't be static

Check this Question online on JavaChamp.com: [Can java constructors be marked static?](#)

1.2.5. When can call super() in java constructors?

What is the expected output?

```
class Plant {
    Plant() {
        System.out.println("Plant created");
    }
}

class Tree extends Plant {
    Tree() {
        System.out.println("Tree created");
        super();
    }
}

public class Test {
    public static void main(String args[]) {
        Tree tree = new Tree();
    }
}
```

Please choose only one answer:

- Plant created
Tree created
- Tree created
Plant created
- RuntimeException
- Compilation error

Check this Question online on JavaChamp.com: [When can call super\(\) in java constructors?](#)

1.2.6. How to call super() in java constructor?

What is the expected output?

```
import java.io.IOException;

class AirPlane {
    public AirPlane() throws IOException {
        System.out.print("AirPlane");
        throw new IOException();
    }
}

class AirJet extends AirPlane {
    public AirJet() throws IOException {
        try {
            super();
        } catch (IOException e) {
            System.out.print("IOException is thrown in AirJet");
        }
    }
}

public class Tester {
    public static void main(String args[]) {
        try {
            new AirJet();
        } catch (IOException e) {
            System.out.print("IOException is thrown in Tester");
        }
    }
}
```

Please choose only one answer:

- "AirPlaneIOException is thrown in AirJet" will be printed
- "AirPlaneIOException is thrown in AirJetIOException is thrown in Tester" will be printed
- "AirPlaneIOException is thrown in Tester" will be printed
- Compile error

Check this Question online on JavaChamp.com: [How to call super\(\) in java constructor?](https://www.java-champ.com/question/exception/how-to-call-super-in-java-constructor/)

1.2.7. How to call this() in java constructor?

The following code contains one compilation error, where could it be?

```
public class Tester {  
    Tester() { } // line 1  
    static void Tester() { this(); } // line 2  
  
    public static void main(String[] args) { // line 3  
        Tester(); // line 4  
    }  
}
```

Please choose only one answer:

- At line 1, constructor Tester must be marked public like its class
- At line 2, constructor call “this()” can only be called inside constructors
- At line 3, compilation error, ambiguity problem, compiler can’t determine whether a constructor Tester or method Tester is called

Check this Question online on JavaChamp.com: [How to call this\(\) in java constructor?](#)

3. Inner class

Exam Category Description and Objectives

1.3.1. How to access an outer class member from inside its inner class?

What is the expected output?

```
public class OuterTest {  
  
    public static void main(String args[]) {  
  
        Airplane airplane = new Airplane(); //line 5  
        Airplane.BlackBox box = airplane.new BlackBox(); // line 6  
        box.printVariables();  
  
    }  
}  
  
class Airplane {  
    String code = "11";  
  
    class BlackBox {  
        String code = "22";  
  
        public void printVariables() {  
            System.out.print(code); // line 19  
            System.out.print(Airplane.this.code); // line 20  
  
        }  
    }  
}
```

Please choose only one answer:

- Compile error because of lines 5-6 (incorrect instantiation)
- Compile error because of line 20 (can't access Airplane's variables)
- 2222
- 1111
- 2211

Check this Question online on JavaChamp.com: [How to access an outer class member from inside its inner class?](#)

1.3.2. How to access a member of an outer class from inside its inner class?

What is the expected output?

```
public class OuterTest {  
    public static void main(String args[]) {  
        Airplane.BlackBox box = new Airplane().new BlackBox(); // line 1  
        box.printVariables();  
    }  
}  
  
class Airplane {  
    String code = "11";  
  
    class BlackBox {  
        String code = "22";  
  
        public void printVariables() {  
            System.out.print(code);  
            System.out.print(Airplane.this.code); // line 20  
        }  
    }  
}
```

Please choose only one answer:

- Compile error because of line 1 (incorrect instantiation)
- Compile error because of line 20 (can't access Airplane's variables)
- 2222
- 1111
- 2211

Check this Question online on JavaChamp.com: [How to access a member of an outer class from inside its inner class?](#)

1.3.3. How to instantiate an inner class inside main()?

Which of the instantiations for a BlackBox are correct and compile-free?

```
public class OuterTest {  
    public static void main(String args[]) {  
        // instantiation 1  
        Airplane airplane = new Airplane();  
        Airplane.BlackBox box1 = airplane.new BlackBox();  
  
        // instantiation 2  
        Airplane.BlackBox box2 = new Airplane().new BlackBox();  
  
        // instantiation 3  
        Airplane airplane3 = new Airplane();  
        BlackBox box3 = airplane3.new BlackBox();  
    }  
}  
  
class Airplane {  
    class BlackBox {  
    }  
}
```

Please choose all the answers that apply:

- Instantiation 1
- Instantiation 2
- Instantiation 3

Check this Question online on JavaChamp.com: [How to instantiate an inner class inside main\(\)?](#)

1.3.4. How to instantiate an inner class?

Which of the instantiations for a BlackBox are correct and compile-free?

```
public class AirJet {  
    public static void main(String[] args) {  
        // instantiation 1  
        Engine engine1 = new AirJet().new Engine();  
  
        // instantiation 2  
        AirJet.Engine engine2 = new AirJet().new Engine();  
  
        // instantiation 3  
        AirJet airjet = new AirJet();  
        Engine engine3 = airjet.new Engine();  
    }  
  
    class Engine{  
    }  
}
```

Please choose all the answers that apply:

- Instantiation 1
- Instantiation 2
- Instantiation 3

Check this Question online on JavaChamp.com: [How to instantiate an inner class?](#)

1.3.5. How to declare java inner class inside a method?

Are the lines 1 and 2 correct and free of error?

```
public class AirPlane {  
    public void fly(int speed) {  
        final int e = 1;  
        class FlyingEquation {  
            {  
                System.out.println(e); // line 1  
                System.out.println(speed); // line 2  
            }  
        }  
    }  
}
```

Please choose only one answer:

- Both statements at lines 1 and 2 are correct
- Both statements at lines 1 and 2 are incorrect and cause compilation errors
- Compilation error at line 1 , inner class can't access outer class local variables
- Compilation error at line 2, inner class can't access method's arguments

Check this Question online on JavaChamp.com: [How to declare java inner class inside a method?](#)

1.3.6. How java inner class access outer class?

What statement,inserted independently at // insert statement here, would produce output "Body" ?

```
public class Body {  
    String name = "Body";  
  
    public static void main(String[] args) {  
        System.out.println(new Body().new Heart().getPName());  
    }  
  
    class Heart {  
        String name = "Heart";  
  
        String getPName() {  
            // insert statement here  
        }  
    }  
}
```

Please choose only one answer:

- return Body.name;
- return Body.this.name;
- return super.name;
- return this.super.name;

Check this Question online on JavaChamp.com: [How java inner class access outer class?](https://www.java-champ.com/question/java-classes/how-java-inner-class-access-outer-class/)

4. Flow Control

Exam Category Description and Objectives

1.4.1. How to write java labeled for loop?

What is the expected output?

```
public class LoopTest {
    public static void goLoop(int a) {

        start: for (int i = 1; i < 2; i++) {
            for (int j = 1; j < 2; j++) {
                if (a < 5) {
                    break;
                }
                System.out.print(i + j);

            }
            if (a > 5) {
                break start;
            }

        }

    }

    public static void main(String args[]) {
        LoopTest.goLoop(15);

    }
}
```

Please choose only one answer:

- 2
- No output is produced
- Compile Error
- Runtime exception is thrown
- 24

Check this Question online on JavaChamp.com: [How to write java labeled for loop?](#)

1.4.2. How to use break and continue in java for loop?

What is the expected output?

```
public class LoopTest {
    public static void goLoop(int a) {

        start: for (int i = 1; i < 2; i++) {
            for (int j = 1; j < 2; j++) {
                if (a > 5) {
                    break start;
                }
                System.out.print(i + j);
            }
        }

    }

    public static void main(String args[]) {
        LoopTest.goLoop(15);
    }
}
```

Please choose only one answer:

- 2
- No output is produced
- Compile Error
- Runtime exception is thrown
- 24

Check this Question online on JavaChamp.com: [How to use break and continue in java for loop?](#)

1.4.3. How to use break and continue loop control commands in java?

What is the result of compiling and running the following code?

```
public class LoopTest {
    public static void goLoop(int a) {

        start; for (int i = 1; i < 2; i++) {
            for (int j = 1; j < 2; j++) {
                if (a > 5) {
                    break start;
                }
                System.out.print(i + j);

            }
        }

    }

    public static void main(String args[]) {
        LoopTest.goLoop(15);

    }
}
```

Please choose only one answer:

- 2
- No output is produced
- Compile Error
- Runtime exception is thrown
- 24

Check this Question online on JavaChamp.com: [How to use break and continue loop control commands in java?](#)

1.4.4. How to use break and continue in java labeled for loop?

What is the result of compiling and running the following code?

```
public class LoopTest {
    public static void goLoop(int a) {

        outside: for (int i = 0; i < 3; i++) {
            inside: for (int j = 1; j < 3; j++) {
                System.out.print(j);
                if (a > 5) {
                    continue outside;
                }
            }
        }

    }

    public static void main(String args[]) {
        LoopTest.goLoop(15);
    }
}
```

Please choose only one answer:

- 121212
- No output is produced
- Compile Error
- Runtime exception is thrown
- 111

Check this Question online on JavaChamp.com: [How to use break and continue in java labeled for loop?](#)

1.4.5. How to use break and continue in java loop?

What is the result of compiling and running the following code?

```
public class LoopTest {
    public static void main(String args[]) {
        int a = 15;
        outside: for (int i = 0; i < 3; i++) { // line 4
            inside: System.out.print(i); // line 5
            for (int j = 1; j < 3; j++) {
                if (a > 5)
                    continue inside; // line 8
                break outside; // line 9
            }
        }
    }
}
```

Please choose only one answer:

- Compile Error at line 5
- Runtime exception is thrown at line 5
- Compile Error at line 8
- Runtime exception is thrown at line 8
- No output is produced
- Compile Error at line 4
- Compile Error at line 9
- Runtime exception is thrown at line 9

Check this Question online on JavaChamp.com: [How to use break and continue in java loop?](https://www.java-champ.com/question/loop-break-continue-java/)

1.4.6. How to use continue and break in java loop?

What is the result of compiling and running the following code?

```
public class LoopTest {
    public static void main(String args[]) {
        int a = 5;
        outside: for (int i = 1; i < 3; i++) {
            inside: for (int j = 1; j < 3; j++) {
                System.out.print(j);
                if (a++ > 6)
                    continue inside;
                break outside;
            }
        }
    }
}
```

Please choose only one answer:

- Compile error
- Runtime exception is thrown
- 1
- 123

Check this Question online on JavaChamp.com: [How to use continue and break in java loop?](#)

1.4.7. How to write java switch statement?

What is the result of compiling and running the following code?

```
public static void main(String[] args) {
    int j = 10;
    switch (1) {
    case 20:
        j += 1;
    case 40:
        j += 2;
    default:
        j += 3;
    case 0:
        j += 4;
    }
    System.out.print(j);
}
```

Please choose only one answer:

- Compile error, can't use constant 1 in the switch, must be final variable
- Compile error, default must be the last statement after all the cases
- Compile error, must have break statement within each case
- 17
- 13

Check this Question online on JavaChamp.com: [How to write java switch statement?](#)

1.4.8. do while loop syntax in java

What is the result of compiling and running the following code?

```
public static void main(String[] args) {  
    do {  
        System.out.print("inside do");  
    } while (false);  
  
    while (false) {  
        System.out.print("inside while");  
    }  
    System.out.print("outside");  
}
```

Please choose only one answer:

- inside dooutside
- outside
- compilation error because of the second loop (while statement)

Check this Question online on JavaChamp.com: [do while loop syntax in java](#)

1.4.9. Java switch statement syntax

Which of the following is correct after running this code ?

```
public class Tester {  
  
    public static void main(String[] args) {  
        char code = 'a';  
        for (int i = 1; i <= 10; i++) {  
            switch (i) {  
  
                case 5: {  
                    System.out.println("match");  
                }  
  
                default: {  
                    System.out.println("default");  
                }  
            }  
        }  
    }  
}
```

Please choose all the answers that apply:

- match will be printed 0 time
- match will be printed one time
- default will be printed 10 times
- default will be printed 11 times

Check this Question online on JavaChamp.com: [Java switch statement syntax](https://www.java-champ.com/question/java-switch-statement-syntax/)

1.4.10. How to use java main method argument?

What is the result of running the following program given the command line:

```
java Tester one two
```

```
public class Tester {  
    public static void main(String[] args) {  
        if (args.length > 0)  
            for (String str : args)  
                System.out.print(str);  
                System.out.print("--");  
    }  
}
```

Please choose only one answer:

- one--two--
- onetwo
- onetwo--
- Tester--one--two--
- Testeronetwo--

Check this Question online on JavaChamp.com: [How to use java main method argument?](#)

1.4.11. Ho to write If-statement in java?

Given the following code, which of if-statements declared is correctly written and causes no compilation error?

```
public class Tester {  
  
    public static void main(String[] args) {  
        int x = 9;  
  
        // stmt 1  
        if (x>0){}  
  
        // stmt 2  
        if (x=9){} else {}  
  
        // stmt 3  
        if (true){  
        } else if (x<0){  
        }  
  
        // stmt 4  
        if (true){  
        } else (x<0){  
        } else {  
        }  
  
        // stmt 5  
        if(true){  
            if (false){  
            }  
        } else {  
        } else {  
            if (true){  
            }  
        }  
    }  
}
```

Please choose all the answers that apply:

- stmt 1
- stmt 2
- stmt 3
- stmt 4
- stmt 5

Check this Question online on JavaChamp.com: [Ho to write If-statement in java?](#)

1.4.12. How to write do while statement in java?

What is the result of compiling and running the following code?

```
public static void main(String[] args) {  
  
    boolean flag = false;  
    int x = 0;  
    do {  
        x++;  
    } while (flag=!flag);  
    System.out.println(x);  
  
}
```

Please choose only one answer:

- 0
- 1
- 2
- 3
- Compilation error
- The loop is infinite and will cause the program to break

Check this Question online on JavaChamp.com: [How to write do while statement in java?](#)

5. Declarations and Access Control

Exam Category Description and Objectives

1.5.1. Can java static methods invoke this?

What is the result of compiling and running the following code?

```
public class Tester {  
    static int x = 4;  
  
    public Tester() {  
        System.out.print(this.x); // line 4  
        Tester();  
    }  
  
    public static void Tester() { // line 8  
        System.out.print(this.x); // line 9  
    }  
  
    public static void main(String... args) { // line 12  
        new Tester();  
    }  
}
```

Please choose only one answer:

- Compile error in line 4 (static x must be only accessed inside static methods)
- Compile error in line 8 (constructors can't be static)
- Compile error in line 9 (static methods can't invoke this)
- Compile error in line 12 (invalid argument type for method main)
- 44

Check this Question online on JavaChamp.com: [Can java static methods invoke this?](#)

1.5.2. What can java static methods make references to?

What is the result of compiling and running the following code?

```
public class Tester {  
  
    static int x = 4;  
    int y = 9;  
  
    public Tester() {  
        System.out.print(this.x); // line 7  
        printVariables();  
    }  
  
    public static void printVariables() {  
        System.out.print(x); // line 12  
        System.out.print(y); // line 13  
    }  
  
    public static void main(String... args) { // line 16  
        new Tester();  
    }  
}
```

Please choose only one answer:

- Compile error at line 7 (static x must be only accessed inside static methods)
- Compile error at line 13 (static methods cant make reference to non-static variables)
- Compile error at line 16 (invalid argument type for method main)
- 49
- Compile error at line 12 (must access x by writing Tester.x)

Check this Question online on JavaChamp.com: [What can java static methods make references to?](#)

1.5.3. How to access a class from another package in java?

You have two packages, trunk1 and trunk2 where class Sheet declared in trunk1 and class Container declared in trunk2, the following code contains a compilation error, where could it be?

```
package trunk1;

public class Sheet {

    public static int pageNumber = 99; // line 1
    Sheet() {} // line 2
}

package trunk2;

import trunk1.Sheet;

public class Container {

    public static void main(String... args) { //line 1
        System.out.print(Sheet.pageNumber); //line 2
        Sheet sheet = new Sheet(); //line 3
    }
}
```

Please choose only one answer:

- In package trunk1 at line 2, constructor Sheet must be marked public like its class
- In package trunk2 at line 1, invalid string argument for method main()
- In package trunk2 at line 2, invalid access to member pageNumber
- In package trunk2 at line 3, invalid call to constructor Sheet()

Check this Question online on JavaChamp.com: [How to access a class from another package in java?](#)

1.5.4. packages and access scope in java

You have three packages, trunk1, trunk2 and trunk3, What is the expected output for running file Tester?

```
package trunk1;

public class Account {

    Account() { //line 3
        System.out.println("Account");
    }
}

package trunk2;

import trunk1.Account;

public class CurrentAccount extends Account{
    public CurrentAccount() { // line 2
        System.out.println("CurrentAccount");
    }
}

package trunk3;

import trunk1.Account;
import trunk2.CurrentAccount;

public class Tester {

    public static void main(String[] args) {
        Account c = new Account(); // line 4
        CurrentAccount ca = new CurrentAccount(); // line 5
    }
}
```

Please choose all the answers that apply:

- Account
CurrentAccount
- Account
Account
CurrentAccount
- Compilation error in package trunk1 at line 3
- Compilation error, in package trunk2 at line 2
- Compilation error, in package trunk3 at line 4
- Compilation error, in package trunk3 at line 5

1.5.5. How to use java static members?

What is the result of compiling and running the following code?

```
public class Tester {  
    static int p = test(); //line 1  
  
    static public int test() {  
        System.out.print(p); //line 4  
        return 99;  
    }  
  
    public static void main(String[] args)  
    {  
        System.out.print(p); //line 11  
    }  
}
```

Please choose only one answer:

- 099
- Compilation error at line 1, p must be initialized by a value
- Compilation error at line 4, using uninitialized variable p
- Compilation error at line 11, p must be called using its class by writing Tester.p

Check this Question online on JavaChamp.com: [How to use java static members?](#)

1.5.6. How to access java class from another package?

Consider the following two classes declared and defined in two different packages, what can be added in class B to form what considered a correct access to class A from main() method of class B?

```
package package.subPackage;

public class A { }

package anotherPackage;
// line 1
public class B {
    public static void main(String[] args) {
        // line 2
    }
}
```

Please choose all the answers that apply:

- In line 1 add nothing
line 2 add : new A();
- In line 1 add: import package.*;
line 2 add : new subPackage.A();
- In line 1 add: import package.subPackage.*;
line 2 add : new A();
- In line 1 add: import package.subPackage.A;
line 2 add : new A();
- Line 1 : add nothing
line 2 add : new package.subPackage.A();

Check this Question online on JavaChamp.com: [How to access java class from another package?](#)

1.5.7. types of relationships between java classes

Given the following declarations, what is considered a correct statement?

```
interface Chewable {}  
interface Eatable extends Chewable{}  
class Vitamin{}  
class Food implements Eatable { Vitamin[] vitamins;}
```

Please choose all the answers that apply:

- Eatable is Chewable
- Vitamin is Eatable
- Food is Chewable
- Food has Vitamin
- Vitamin has Food
- Food is Object

Check this Question online on JavaChamp.com: [types of relationships between java classes](#)

1.5.8. Can java constructor be private?

What is the result of compiling and running the following code?

```
class Base {  
    private Base() {System.out.print("Base");}  
}  
  
public class Derived extends Base {  
    public Derived() {System.out.print("Derived");}  
  
    public static void main(String[] args) {  
        new Derived();  
    }  
}
```

Please choose only one answer:

- BaseDerived
- Derived
- Exception is thrown at runtime
- Compilation error

Check this Question online on JavaChamp.com: [Can java constructor be private?](#)

1.5.9. what does final do in java?

Which of the following is true?

Please choose all the answers that apply:

- When a class marked final, it cannot be extended
- When a method marked final, it cannot be overridden
- When a method marked final, it cannot be overloaded
- Local variables of a method cannot be final
- A variable of a primitive type (int,float,..) which marked final, its value at initialization cannot be changed

Check this Question online on JavaChamp.com: [what does final do in java?](#)

6. Interfaces and Abstract Classes

Exam Category Description and Objectives

1.6.1. How to declare a class inside an interface in java?

Is the following declaration for interface Bendable correct and free of compilation error?

```
abstract interface Bendable { // line 1
    final int x = 2009; // line 3
    void method1() ; // line 5
    public static class Angle {} // line 6
}
```

Please choose only one answer:

- Yes, this is a correct and free of error declaration
- No, compilation error at line 1 , abstract should be removed
- No, compilation error at line 3 , x should be declared public final
- No, compilation error at line 5 , method method1() should be declared public abstract
- No, compilation error at line 6 , can't declare a class inside an interface

Check this Question online on JavaChamp.com: [How to declare a class inside an interface in java?](#)

1.6.2. How to declare java interface?

Is the following declaration for interface Bendable correct and free of compilation error?

```
abstract interface Bendable { // line 1
    final int x = 2009; // line 3
    void method1(); // line 5
}
```

Please choose only one answer:

- Yes, this is a correct and free of error declaration
- No, compilation error at line 1, Bendable should be declared public abstract
- No, compilation error at line 3, x should be declared public final
- No, compilation error at line 5, method method1() should be declared public abstract

Check this Question online on JavaChamp.com: [How to declare java interface?](#)

1.6.3. What are java interface legal declaration rules?

Is the following declaration for interface Bendable correct and free of compilation error?

```
abstract interface Bendable { // line 1
    final int x = 2009; // line 3
    void method1(){}; // line 5
}
```

Please choose only one answer:

- Yes, this is a correct and free of error declaration
- No, compilation error at line 1
- No, compilation error at line 3
- No, compilation error at line 5

Check this Question online on JavaChamp.com: [What are java interface legal declaration rules?](#)

1.6.4. How to extend java abstract class?

Would the following code compile correctly?

```
abstract class AirPlane {  
    abstract void fly();  
  
    void land() { // line 5  
        System.out.print("Landing..");  
    }  
}  
  
class AirJet extends AirPlane {  
    AirJet() {  
        super(); // line 14  
    }  
  
    void fly() {  
        System.out.print("Flying..");  
    }  
}
```

Please choose only one answer:

- Yes, it will compile with no errors
- No, because at line 5 method land() must be abstract since class AirPlane is abstract
- No, because class AirJet must override method land()
- No, because at line 14 AirJet constructor is calling the super() while AirPlane has no constructor defined

Check this Question online on JavaChamp.com: [How to extend java abstract class?](#)

1.6.5. Extending java abstract class

The following code contains a compilation error , what can be done to fix this error - independently?

```
abstract class AirPlane { // line 1
    abstract void fly(); // line 2

    void land() {
        System.out.print("Landing..");
    }
}

class AirJet extends AirPlane { // line 10

    AirJet() {
        super(); // line 13
    }

    void fly() {
        System.out.print("Flying..");
    }

    abstract void land() ; // line 20
}
```

Please choose all the answers that apply:

- Remove abstract from line 20 and add body to method land()
- Declare class AirJet as abstract to at line 10
- Remove super() call at line 13
- Remove abstract at line 1 and line 2

Check this Question online on JavaChamp.com: [Extending java abstract class](#)

1.6.6. Rules of declaring java abstract Class

Which of the following is true?

Please choose all the answers that apply:

- If a class is declared abstract , it must contain at least one abstract method
- If a class is declared abstract , all its methods must be abstract
- A method can either be final or abstract
- If a method is abstract then its class must be declared abstract
- An Abstract method has no body and ends with a semicolon

Check this Question online on JavaChamp.com: [Rules of declaring java abstract Class](#)

1.6.7. How to declare variables inside java interface?

Which of the following variables is incorrectly declared?

```
public abstract interface Bouncable {  
  
    int a = 0;  
    public int b = 1;  
    public static int c = 2;  
    public static transient d = 3;  
    public final int e = 3;  
    public static final int f = 3;  
  
}
```

Please choose only one answer:

- a
- b
- c
- d
- e
- f

Check this Question online on JavaChamp.com: [How to declare variables inside java interface?](#)

1.6.8. How to declare java abstract method?

Three of the methods are incorrectly declared, which are they?

```
public abstract class Tester {  
    public void test1();  
    public final void test2() {};  
    public static void test3() {};  
    public abstract static void test4();  
    public abstract final void test5();  
}
```

Please choose only one answer:

- test1 , test2 and test4
- test2 , test4 and test5
- test1 , test4 and test5

Check this Question online on JavaChamp.com: [How to declare java abstract method?](#)

1.6.9. What are the rules to implement an interface?

Considering the following declaration for interface Convertable, which of the following code segments will compile?

```
public interface Convertable {  
    int convertToInt();  
    char convertToChar();  
}
```

Please choose all the answers that apply:

- class Digit implements Convertable {

 public char convertToChar() {
 return 0;
 }

 public int convertToInt() {
 return 0;
 }

}
- abstract class Digit implements Convertable {
 int convertToInt() ;
 char convertToChar();
}
- abstract class Digit implements Convertable {

 public int convertToInt() {
 return 0;
 }
}
- abstract class Digit implements Convertable {
 public int convertToInt() {
 return 0;
 }
 char convertToChar();
}
- class Digit implements Convertable {
 int convertToInt() {
 return 0;
 }
}

```
}
```

```
char convertToChar() {  
    return 0;  
}  
}
```

- interface Roundable extends Convertable {
 int roundUp();
}

Check this Question online on JavaChamp.com: [What are the rules to implement an interface?](#)

1.6.10. How to declare java abstract class?

Which of the following is a free compilation-error declaration ?

Please choose all the answers that apply:

- `public abstract class Digit { public abstract void print(); }`
- `public class Digit { public abstract void print(); }`
- `public abstract class Digit { public abstract void print(){} }`
- `public abstract class Digit { public void print();}`
- `public class Digit { public void print(){};}`

Check this Question online on JavaChamp.com: [How to declare java abstract class?](#)

1.6.11. how to write an interface?

Which of the following is correct about an interface in java?

Please choose all the answers that apply:

- An Interface can only declare constants
- All methods in an interface are implicitly abstract
- Methods in an interface may be public, private, protected.
- An interface can implement an abstract class
- An interface can be final

Check this Question online on JavaChamp.com: [how to write an interface?](#)

7. Exceptions

Exam Category Description and Objectives

1.7.1. Catching java exceptions

What is the expected output?

```
import java.io.IOException;

class Father {
    public Father() throws IOException {
        System.out.print("Father");
        throw new IOException();
    }
}

class Son extends Father {
    public Son() throws IOException {
        System.out.print("Son");
    }
}

public class Tester {
    public static void main(String[] args) {
        try {
            new Son();
        } catch (IOException e) {
            System.out.print("Inside catch");
        }
    }
}
```

Please choose only one answer:

- Compile error, constructors can't throw Exceptions
- FatherSon
- FatherInside catch
- Father, then an IOException is thrown
- Son
- SonInside catch

Check this Question online on JavaChamp.com: [Catching java exceptions](#)

1.7.2. How to handle java unchecked exceptions?

What is the expected output?

```
class Father {
public Father() throws RuntimeException {
    System.out.print("Father");
    throw new RuntimeException();
}
}

class Son extends Father {
public Son() throws RuntimeException {
    System.out.print("Son");
}
}

public class Tester {
public static void main(String[] args) {
    new Son(); // line 17
}
}
```

Please choose only one answer:

- Compile error, an import to java.lang.RuntimeException is required
- Father will be printed then a RuntimeException would be thrown
- Compile error at line 17, new Son() should be within a try/catch block
- Son
- SonFather
- FatherSon

Check this Question online on JavaChamp.com: [How to handle java unchecked exceptions?](https://www.java-champ.com/question/unchecked-exceptions/how-to-handle-java-unchecked-exceptions/)

1.7.3. How to catch java exceptions?

What is the expected result?

```
import java.io.IOException;

class AirPlane {
    public AirPlane() {
        System.out.print("AirPlane");
    }
}

class AirJet extends AirPlane {
    public AirJet() throws IOException {
        try {
            throw new IOException();
        } catch (IOException e) {
            System.out.print("IOException is thrown in AirJet");
        }
    }
}

public class Tester {
    public static void main(String args[]) {
        try {
            new AirJet();
        } catch (IOException e) {
            System.out.print("IOException is thrown in Tester");
        }
    }
}
```

Please choose only one answer:

- "AirPlaneIOException is thrown in AirJetIOException is thrown in Tester" will be printed
- "AirPlaneIOException is thrown in AirJet" will be printed
- "AirPlaneIOException is thrown in Tester" will be printed
- Compilation error

Check this Question online on JavaChamp.com: [How to catch java exceptions?](https://www.java-champ.com/question/how-to-catch-java-exceptions/)

1.7.4. Can java constructors throw exceptions?

What is the expected output?

```
import java.io.IOException;

class AirPlane {
    public AirPlane() throws IOException, RuntimeException {
        System.out.println("AirPlane");
    }
}

class AirJet extends AirPlane { } // line 7

public class Tester {
    public static void main(String args[]) throws IOException { // line 10
        new AirPlane(); // line 11
    }
}
```

Please choose only one answer:

- AirPlane
- Compile error at line 7, AirJet must declare a constructor that throws IOException or any of its supertypes
- Compile error at line 10, main() must throw also RuntimeException
- Compile error at line 11, new AirPlane() must be within try/catch block

Check this Question online on JavaChamp.com: [Can java constructors throw exceptions?](#)

1.7.5. How to use a try catch in java?

What is the expected output?

```
interface Foldable {
    public void fold() throws Exception ;
}

class Paper implements Foldable {
    public void fold() { // line 6
        System.out.print("Fold");
    }
}

public class Tester {
    public static void main(String args []) {
        Foldable obj1 = new Paper();
        obj1.fold(); // line 8
        Paper obj2 = new Paper(); // line 10
        obj2.fold();
    }
}
```

Please choose only one answer:

- FoldFold
- Compilation error at line 6, fold() must declare at header throws Exception
- Compilation error at line 8, unhandled exception
- RuntimeException at line 8
- Compilation error at line 10, unhandled exception
- RuntimeException at line 10

Check this Question online on JavaChamp.com: [How to use a try catch in java?](#)

1.7.6. How to declare try catch finally block in java?

What is the result of compiling and running the following code?

```
public static void main(String[] args) {  
    System.out.print("1");  
    try {  
        System.out.print("2");  
        System.exit(0);  
    } finally {  
        System.out.print("3");  
    }  
}
```

Please choose only one answer:

- 123
- 12
- Compilation error , there should be at least one catch before finally

Check this Question online on JavaChamp.com: [How to declare try catch finally block in java?](#)

1.7.7. try catch finally block in java

What is the result of compiling and running the following code?

```
public static void main(String[] args) {  
    System.out.print("1");  
    try {  
        return;  
    } catch (Exception e) {  
        System.out.print("2");  
    } finally {  
        System.out.print("3");  
    }  
    System.out.print("4");  
}
```

Please choose only one answer:

- 1234
- 13
- 1
- Compilation error

Check this Question online on JavaChamp.com: [try catch finally block in java](https://www.java-champ.com/question/try-catch-finally-block-in-java/)

1.7.8. How to write java try catch statement?

What is the result of compiling and running the following program?

```
public class Tester {  
    public static void main(String[] args) {  
        try {  
            throw new RuntimeException();  
        } catch (RuntimeException e) {  
            System.out.println("RuntimeException");  
        } catch (ArithmeticException e) {  
            System.out.println("ArithmeticException");  
        } catch (Exception e) {  
            System.out.println("Exception");  
        }  
    }  
}
```

Please choose only one answer:

- "RuntimeException" is printed
- "Exception" is printed
- "ArithmeticException" is printed
- Compilation error

Check this Question online on JavaChamp.com: [How to write java try catch statement?](#)

1.7.9. How to write java nested try catch?

What is the result of compiling and running the following code?

```
public class Tester {  
  
    static void method() throws Exception {  
        throw new Exception();  
    }  
  
    public static void main(String[] args) {  
  
        try {  
            method();  
        } catch (Throwable e) {  
            try {  
                throw new Exception() ;  
            } catch (Exception ex) {  
                System.out.print("exception");  
            } finally {  
                System.out.print("finally");  
            }  
        }  
    }  
}
```

Please choose only one answer:

- "exception" is printed
- "finally" is printed
- "exceptionfinally" is printed
- Compilation error

Check this Question online on JavaChamp.com: [How to write java nested try catch?](#)

1.7.10. How to write nested try catch in java?

What is the result of compiling and running the following code?

```
public class Tester {  
  
    static void method(){  
        throw new Exception();  
    }  
  
    public static void main(String[] args) {  
  
        try {  
            method();  
        } catch (Throwable e) {  
            try {  
                throw new Exception() ;  
            } catch (Exception ex) {  
                System.out.print("exception");  
            } finally {  
                System.out.print("finally");  
            }  
        }  
    }  
}
```

Please choose only one answer:

- exception
- finally
- exceptionfinally
- Compilation error

Check this Question online on JavaChamp.com: [How to write nested try catch in java?](#)

1.7.11. how to handle exceptions in java?

The following code contains compilation errors, what of the following possible solutions (made together) can be done to remove these errors?

```
import java.io.File;
import java.text.DateFormat;
import java.util.Date;

public class Tester {

    static void call() { // line 3
        File file = new File("javachamp.dat"); //line 4
        file.createNewFile(); // line 5
        throw new IllegalArgumentException(); // line 6
    }

    public static void main(String[] args) {

        call(); // line 11
        DateFormat df = DateFormat.getDateInstance(); // line 12
        Date parse = df.parse("12.11.2009"); // line 13
    }
}
```

Please choose all the answers that apply:

- Add throws IOException declaration to call() at line 3
- Add throws FileNotFoundException declaration to call() at line 3
- Add throws IllegalArgumentException declaration to call() at line 3
- Surround code from line 11 to 13 with try { } catch (IOException e) {} block
- Surround code from line 11 to 13 with try { } catch (Exception e) {} block

Check this Question online on JavaChamp.com: <http://www.java-champ.com/question/how-to-handle-exceptions-in-java/>

1.7.12. How to handle exceptions using try/catch block?

What is the result of compiling and running the following code?

```
public class Tester {  
  
    public static void main(String[] args) {  
        String stmt = "javachamp 2009";  
        String[] arr = stmt.split(" ");  
        try {  
            int x = Integer.parseInt(arr[1]);  
            System.out.print(x);  
        } finally {  
            System.out.print("finally");  
        }  
    }  
}
```

Please choose only one answer:

- 2009
- finally
- 2009finally
- No output will be produced
- Compilation error

Check this Question online on JavaChamp.com: [How to handle exceptions using try/catch block?](#)

1.7.13. How to write try catch statement in java?

What is the result of compiling and running the following code?

```
public class Tester {  
  
    public static void main(String[] args) {  
        String stmt = "javachamp 2009";  
        String[] arr = stmt.split(" ");  
        try {  
            int x = Integer.parseInt(arr[0]);  
            System.out.print(x);  
        } catch (Exception e) {  
            System.out.print("catch");  
        } finally {  
  
            System.out.print("finally");  
        }  
    }  
}
```

Please choose only one answer:

- 2009
- 2009finally
- catchfinally
- No output will be produced
- Compilation error
- 2009catchfinally

Check this Question online on JavaChamp.com: [How to write try catch statement in java?](#)

1.7.14. When java NoClassDefFoundError is thrown?

In which case a NoClassDefFoundError will be thrown?

Please choose only one answer:

- When try to compile a non found java file
- When try to run a non found java .class file
- When try to compile a non found java file or try to run a non found java .class file

Check this Question online on JavaChamp.com: [When java NoClassDefFoundError is thrown?](#)

8. Inheritance

Exam Category Description and Objectives

1.8.1. How to extend or implement in java?

Are the following declarations correct, if you knew that they are in the same package?

```
interface Bouncable{ } // line 1
interface Colorable extends Bouncable{ } // line 2
class Super implements Colorable{ } // line 3
class Sub implements Colorable extends Super { } // line 4
```

Please choose only one answer:

- Yes, the declarations are correct
- No there is a compilation error at line 2, must implements not extends
- No there is a compilation error at line 4, over implementing for interface Colorable, Super is already implementing it
- No there is a compilation error at line 4, extends should come before implements

Check this Question online on JavaChamp.com: [How to extend or implement in java?](#)

1.8.2. How to implement or extend in java?

Which of the following is true?

Please choose all the answers that apply:

- A class can extend more than one class
- A class can extend only one class but many interfaces
- An interface can extend many interfaces
- An interface can implement many interface
- A class can extend one class and implement many interfaces

Check this Question online on JavaChamp.com: [How to implement or extend in java?](#)

1.8.3. How to use java instanceof?

Which lines will evaluate to true?

```
interface Colorable { }  
interface Bouncable extends Colorable { }  
class Super implements Bouncable { }  
class Sub extends Super implements Bouncable { }  
public class Tester {  
    public static void main(String[] args) {  
        System.out.println(new Sub() instanceof Super); //line 1  
        System.out.println(new Sub() instanceof Bouncable); //line 2  
        System.out.println(new Sub() instanceof Colorable); //line 3  
        System.out.println(new Super() instanceof Sub); //line 4  
        System.out.println(new Super() instanceof Colorable); //line 5  
    }  
}
```

Please choose all the answers that apply:

- All lines will evaluate to true
- All lines will evaluate to true and only line 4 will evaluate to false
- Only line 1 and 2 will evaluate to true
- Lines 3 and 5 will evaluate to false

Check this Question online on JavaChamp.com: [How to use java instanceof?](#)

1.8.4. how to use instanceof java?

what is the result of compiling and running the following code?

```
interface Colorable { }  
interface Bouncable extends Colorable { }  
class Super implements Bouncable { }  
class Sub extends Super implements Bouncable { }  
class Individual { }  
public class Tester {  
    public static void main(String[] args) {  
        System.out.print(new Sub() instanceof Super);  
        System.out.print(new Sub() instanceof Colorable);  
        System.out.print(new Super() instanceof Sub);  
        System.out.print(new Individual() instanceof Super);  
    }  
}
```

Please choose only one answer:

- true>true>false>false
- true>false>false>false
- Compilation error
- RuntimeException because of the print statemen

Check this Question online on JavaChamp.com: [how to use instanceof java?](https://www.java-champ.com/question/instanceof-java/)

1.8.5. How to cast java variables?

Would the following code compile and if yes , what is the output?

```
interface Colorable {}

class Vehicle {}

class Car extends Vehicle implements Colorable {}

public class Tester {

    public static void main(String[] args) {

        Vehicle a = new Car();
        Colorable i = (Colorable) a;

        Vehicle b = new Vehicle();
        Colorable j = (Colorable) b;
    }
}
```

Please choose only one answer:

- The code compiles fine and produces no output
- The code compiles fine but throws a RuntimeException because of the second casting
- There is a compilation error because of the second casting
- The code compiles fine but throws a RuntimeException because of the first casting

Check this Question online on JavaChamp.com: [How to cast java variables?](https://www.java-champ.com/question/how-to-cast-java-variables/)

1.8.6. casting objects in java

Would the following code compile and if yes , what is the output?

```
interface Colorable {}

class Vehicle {}

class Car extends Vehicle implements Colorable {}

public class Tester {

    public static void main(String[] args) {

        Vehicle a = new Car();
        Colorable i = (Colorable) a;

        Vehicle b = new Vehicle();
        Colorable j = (Colorable) b;
    }
}
```

Please choose only one answer:

- The code compiles fine and produces no output
- The code compiles fine but throws a RuntimeException because of the second casting
- There is a compilation error because of the second casting

Check this Question online on JavaChamp.com: [casting objects in java](https://www.java-champ.com/question/casting-objects-in-java/)

1.8.7. Order of constructor calls of java derived classes

What is the output of compiling and running the following program?

```
class Category {
    Category() {
        System.out.print("Category_");
    }
}

class SubCategory extends Category {
    SubCategory() {
        System.out.print("SubCategory_");
    }
}

class SubSubCategory extends SubCategory {
    SubSubCategory() {
        System.out.print("SubSubCategory_");
    }
}

public class Tester {

    public static void main(String[] args) {
        new SubSubCategory();
    }
}
```

Please choose only one answer:

- SubSubCategory_SubCategory_Category_
- SubSubCategory_
- Category_SubCategory_SubSubCategory_

Check this Question online on JavaChamp.com: [Order of constructor calls of java derived classes](#)

1.8.8. using instanceof in java

What is the result of compiling and running the following code?

```
interface Chewable {}
interface Eatable extends Chewable{}
class Food implements Chewable { }
class Meat extends Food {}
class Gum implements Chewable{}

public class Tester {

    public static void main(String[] args) {

        Food food = new Food();
        Meat meat = new Meat();
        Gum gum = new Gum();

        System.out.print(food instanceof Eatable);
        System.out.print(meat instanceof Food);
        System.out.print(gum instanceof Food);
        System.out.print(gum instanceof Chewable);

    }
}
```

Please choose only one answer:

- true true true
- true true false true
- false true false true
- Compilation error

Check this Question online on JavaChamp.com: [using instanceof in java](#)

1.8.9. How to use instanceof in java?

What is the result of compiling and running the following code?

```
interface Chewable {}
interface Eatable extends Chewable{}
class Food implements Eatable { }
class Meat extends Food {}
class Gum implements Chewable{}

public class Tester {

    public static void main(String[] args) {

        Food food = new Food();
        Meat meat = new Meat();
        Gum gum = new Gum();

        System.out.print(food instanceof Chewable);
        System.out.print(meat instanceof Eatable);
        System.out.print(gum instanceof Eatable);
        System.out.print(gum instanceof Chewable);

    }
}
```

Please choose only one answer:

- false true false true
- true true false true
- true true true true
- Compilation error

Check this Question online on JavaChamp.com: [How to use instanceof in java?](#)

1.8.10. how to implement interface or extend class in java?

Which of the following statements is correct?

Please choose all the answers that apply:

- A class can extend one class and many interfaces
- A class can implement one class and many interfaces
- A class can extend one class and implements many interfaces
- An interface can extend many classes and interfaces
- An interface can implement many classes and interfaces
- An interface can implement many interfaces
- An interface can extend many interfaces

Check this Question online on JavaChamp.com: [how to implement interface or extend class in java?](#)

1.8.11. How to write constructor for derived class in java?

What is the result of compiling and running the following code?

```
class Base {  
    public void Base() {System.out.print("Base");}  
}  
  
public class Derived extends Base {  
    public Derived() {System.out.print("Derived");}  
  
    public static void main(String[] args) {  
        new Derived();  
    }  
}
```

Please choose only one answer:

- BaseDerived
- DerivedBase
- Derived
- Base
- Compilation error

Check this Question online on JavaChamp.com: [How to write constructor for derived class in java?](#)

1.8.12. Inheritance and constructors in java

What is the result of compiling and running the following code?

```
class Base {  
  
    public Base(String n) {System.out.print("Base1");}  
    public void Base(String n) {System.out.print("Base2");}  
  
}  
  
public class Derived extends Base {  
  
    public Derived() {System.out.print("Derived");}  
  
    public static void main(String[] args) {  
        new Derived();  
    }  
}
```

Please choose only one answer:

- Base1Derived
- Base2Derived
- Derived
- Compilation error

Check this Question online on JavaChamp.com: [Inheritance and constructors in java](#)

1.8.13. How to call this inside java constructor?

What is the result of compiling and running the following code?

```
class Base {  
    public Base() {System.out.print("Base");}  
}  
  
public class Derived extends Base {  
    public Derived() {this("JavaChamp"); System.out.print("Derived");}  
    public Derived(String s) { System.out.print(s);}  
  
    public static void main(String[] args) {  
        new Derived();  
    }  
}
```

Please choose only one answer:

- JavaChampDerived
- JavaChampBaseDerived
- BaseJavaChampDerived
- JavaChampDerivedBase
- Compilation error

Check this Question online on JavaChamp.com: [How to call this inside java constructor?](#)

1.8.14. When java classCastException is thrown?

Which statement(s), inserted independently at // insert code here, will compile?

```
class Creature {
    String getName() {
        return "Creature";
    }
}

class Bird extends Creature {
    String getName() {
        return "Bird";
    }
}

class Falcon extends Bird {
    String getName() {
        return "Falcon";
    }
}

public class Tester {

    public static Bird getIt(Creature c) {
        System.out.println(c.getName());
        return (Bird) c;
    }

    public static void main(String[] args) {
        // insert code here
    }
}
```

Please choose all the answers that apply:

- `getIt(new Creature());`
- `getIt(new Bird());`
- `getIt(new Falcon());`
- `getIt(new Object());`

Check this Question online on JavaChamp.com: [When java classCastException is thrown?](#)

1.8.15. How to cast in java?

The following program fails to compile, where could possibly be the compilation error(s)?

```
class Creature {}  
class Bird extends Creature {}  
class Falcon extends Bird {}  
public class Tester {  
    public static void main(String[] args) {  
        Creature c1 = new Creature();  
        Creature c2 = new Bird();  
  
        Bird b1 = (Bird) c1; // Line 1  
        Bird b2 = (Falcon) c2; // Line 2  
        Bird b3 = c2; // Line 3  
        Bird b4 = new Falcon(); // Line 4  
        Bird b5 = (Bird) new Creature(); // Line 5  
        Falcon f1 = b4; // Line 6  
    }  
}
```

Please choose all the answers that apply:

- Line 1
- Line 2
- Line 3
- Line 4
- Line 5
- Line 6

Check this Question online on JavaChamp.com: [How to cast in java?](https://www.java-champ.com/question/how-to-cast-in-java/)

1.8.16. Casting rules in java

What inserted, independently at // insert code here , will compile?

```
class Creature {
    void grow() {
    }
}

class Bird extends Creature {
    void fly() {
    }
}

class Falcon extends Bird {
    void hunt() {
    }
}

public class Tester {

    public static void main(String[] args) {
        Creature c1 = new Bird();
        Falcon c2 = new Falcon();

        // insert code here

    }
}
```

Please choose all the answers that apply:

- `c1.grow();`
- `c1.fly();`
- `((Bird)c1).fly();`
- `((Falcon)c1).hunt();`

Check this Question online on JavaChamp.com: [Casting rules in java](#)

1.8.17. How to java cast?

What inserted, independently at // insert code here , will compile and run with no errors and exceptions?

```
class Creature {
    void grow() {
    }
}

class Bird extends Creature {
    void fly() {
    }
}

class Falcon extends Bird {
    void hunt() {
    }
}

public class Tester {

    public static void main(String[] args) {
        Creature c1 = new Bird();
        Falcon c2 = new Falcon();

        // insert code here

    }
}
```

Please choose all the answers that apply:

- `c1.grow();`
- `c1.fly();`
- `((Bird)c1).fly();`
- `((Falcon)c1).hunt();`

Check this Question online on JavaChamp.com: [How to java cast?](https://www.java-champ.com/question/java-cast/how-to-java-cast/)

9. Arrays

Exam Category Description and Objectives

1.9.1. how to declare java array?

What is the result of compiling and running the following code?

```
public static void main(String[] args) {  
    int[] a = new int[0];  
    System.out.print(a.length);  
}
```

Please choose only one answer:

- 0
- Compilation error, arrays cannot be initialized to zero size
- Compilation error, it is a.length() not a.length

Check this Question online on JavaChamp.com: [how to declare java array?](#)

1.9.2. array size in java

What is the result of compiling and running the following code?

```
public class Tester {  
  
    static void test(int[] a) {  
        int[] b = new int[2];  
        a = b;  
        System.out.print(b.length);  
        System.out.print(a.length);  
    }  
  
    public static void main(String[] args) {  
  
        int[] a = new int[5];  
        test(a);  
        System.out.print(a.length);  
  
    }  
}
```

Please choose only one answer:

- 225
- 255
- 200

Check this Question online on JavaChamp.com: [array size in java](#)

1.9.3. When ArrayIndexOutOfBoundsException is thrown?

What is true after running the following code?

```
public static void main(String[] args) {  
    String entries[] = {"entry1","entry2"};  
    int count=0;  
    while (entries [count++]!=null){  
        System.out.println(count);  
    }  
        System.out.println(count);  
}
```

Please choose all the answers that apply:

- An Exception will be thrown
- 0 will be printed as part of the output
- 2 will be printed as part of the output
- 3 will be printed as part of the output

Check this Question online on JavaChamp.com: [When ArrayIndexOutOfBoundsException is thrown?](#)

1.9.4. Array declaration in java

Which of the following declarations of an array is incorrect?

```
public static void main(String[] args) {  
    int[] a[];  
    int b[3];  
    int []c[];  
    int[] d[];  
}
```

Please choose only one answer:

- a
- b
- c
- d

Check this Question online on JavaChamp.com: [Array declaration in java](#)

1.9.5. When java ArrayIndexOutOfBoundsException is thrown?

What is the result of compiling and running the following program?

```
public class Tester {  
    final static int x[] = new int[5];  
    public static void main(String[] args) {  
        final int x = new Tester().x[5];  
        if (x <= 10)  
            System.out.println("javachamp");  
    }  
}
```

Please choose only one answer:

- Compilation error
- ArrayIndexOutOfBoundsException is thrown
- javachamp
- No output is produced

Check this Question online on JavaChamp.com: [When java ArrayIndexOutOfBoundsException is thrown?](#)

10. Operators

Exam Category Description and Objectives

1.10.1. Incrementing java static variable

What is the result of compiling and running the following code?

```
public class Tester {  
    static int i ;  
  
    private static int increment(int i) {  
        return i++;  
    }  
  
    public Tester() {  
        i = 1;  
    }  
  
    public static void main(String[] args) {  
        System.out.print(i);  
        System.out.print(i = increment(i));  
    }  
}
```

Please choose only one answer:

- 01
- 00
- 12
- Compilation error

Check this Question online on JavaChamp.com: [Incrementing java static variable](#)

1.10.2. How to use java short circuit operators?

Which of the following if statement(s) may throw a NullPointerException?

```
public class Tester {  
    public int code;  
    public static void main(String[] args) {  
        Tester val = null;  
        if((val!=null) & (val.code >0));//line 1  
        if((val!=null) && (val.code >0));//line 2  
        if((val==null) | (val.code==0));//line 3  
        if((val==null) || (val.code==0));//line 4  
    }  
}
```

Please choose all the answers that apply:

- Line 1
- Line 2
- Line 3
- Line 4

Check this Question online on JavaChamp.com: [How to use java short circuit operators?](#)

1.10.3. How to use java conditional operators?

What is the result of compiling and running the following code?

```
public class Tester {  
  
    static boolean isEven(int x) {  
        return (x % 2 == 0) ? true : false;  
    }  
  
    public static void main(String[] args) {  
        System.out.print(isEven(2));  
        System.out.print(isEven(3));  
        System.out.print(isEven(4));  
  
    }  
}
```

Please choose only one answer:

- truefalsetrue
- falsefalsetrue
- falsefalsefalse
- Compilation error
- An exception is thrown at run time

Check this Question online on JavaChamp.com: [How to use java conditional operators?](#)

1.10.4. Short circuit vs non shortcircuit operators in java

What is the result of compiling and running the following code?

```
public class Tester {  
  
    public static void main(String[] args) {  
        int x = 0;  
        int i = 1;  
        for (; i > 0; i--)  
            if ((++x > 0) | (--i > 0))  
                x++;  
                System.out.println(x + " " + i);  
    }  
}
```

Please choose only one answer:

- Compilation error
- 21
- 20
- 2-1

Check this Question online on JavaChamp.com: [Short circuit vs non shortcircuit operators in java](#)

1.10.5. short circuit operators in java

What is the result of compiling and running the following code?

```
public class Tester {  
    public static void main(String[] args) {  
        int x = 0;  
        int y = 0;  
        if ((true & false) | (true & false) & x++>0)  
            System.out.print("stmt1 ");  
        if (false || true | (++y> 0 | y++>0))  
            System.out.print("stmt2 ");  
        System.out.print(x+ " "+y);  
    }  
}
```

Please choose only one answer:

- stmt1 stmt2 1 2
- stmt1 stmt2 0 0
- stmt2 1 2
- stmt2 0 2
- 0 0

Check this Question online on JavaChamp.com: [short circuit operators in java](https://www.java-champ.com/question/short-circuit-operators-in-java/)

1.10.6. Concatenating operands in java

What is the result of compiling and running the following code?

```
public class Tester {  
  
    public static void main(String[] args) {  
        System.out.print("" + 7 + 2 + " ");  
        System.out.print(7 + 2 + " ");  
    }  
}
```

Please choose only one answer:

- 9 9
- 72 9
- 9 72
- 72 72

Check this Question online on JavaChamp.com: [Concatenating operands in java](#)

1.10.7. Java Boolean Logical Operators

What is the result of compiling and running the following code?

```
public class Tester {  
    public static void main(String[] args) {  
        boolean flag = true;  
        int x = 5;  
        int result = (8 * 2) % x;  
        System.out.print(!(result > 0) ^ true ^ (flag = false));  
        System.out.print(flag);  
    }  
}
```

Please choose only one answer:

- truefalse
- truetrue
- falsefalse
- falsetrue
- Compilation error

Check this Question online on JavaChamp.com: [Java Boolean Logical Operators](#)

1.10.8. short circuit logical operators in java

What is the result of compiling and running the following code?

```
public class Tester {  
    public static void main(String[] args) {  
        boolean flag = true;  
        int x = 5;  
        int result = (8 * 2) % x;  
        System.out.print(!(result > 0) ^ true ^ !(flag = false));  
        System.out.print(flag);  
    }  
}
```

Please choose only one answer:

- truefalse
- truetrue
- falsefalse
- falsetrue
- Compilation error

Check this Question online on JavaChamp.com: [short circuit logical operators in java](#)

11. Variables and Methods

Exam Category Description and Objectives

1.11.1. Using java variable before initialization

What is the result of compiling and running the following code?

```
public static void main(String[] args) {  
    int x = 5, y;  
    while (++x < 7) {  
        y = 2;  
    }  
    System.out.println(x + y);  
}
```

Please choose only one answer:

- 7
- 8
- 9
- Compilation error

Check this Question online on JavaChamp.com: [Using java variable before initialization](#)

1.11.2. How to write method main in java?

Would the following code compile and run?

```
public class Tester {  
  
    public static void main(String args) {  
        System.out.println("JavaChamp");  
    }  
}
```

Please choose only one answer:

- The program will compile and run fine printing JavaChamp as output
- The program will compile fine but won't run correctly, a NoSuchMethodError exception would be thrown
- There is a compilation error at declaring the main() argument, should be an array of String instead

Check this Question online on JavaChamp.com: [How to write method main in java?](#)

1.11.3. java class data members

What is the result of compiling and running the following code?

```
public class Tester {  
  
    static {  
        int x = 3;  
    }  
  
    static int x;  
  
    public static void main(String[] args) {  
        x--; // line 7  
        System.out.println(x);  
    }  
}
```

Please choose only one answer:

- 3
- 2
- -1
- Compilation error at line 7, x is not initialized

Check this Question online on JavaChamp.com: [java class data members](#)

1.11.4. How to use java local variables?

What is the result of compiling and running the following program?

```
public class Tester {  
  
    public static void main(String[] args) {  
        int x = 1;  
        int y;  
        while(++x<5) y++;  
        System.out.println(y);  
    }  
}
```

Please choose only one answer:

- 0
- 3
- 4
- Compilation error

Check this Question online on JavaChamp.com: [How to use java local variables?](#)

1.11.5. Java local variables initialization

What is the result of compiling and running the following program?

```
public class Tester {  
  
    public static void main(String[] args) {  
        int x = 1;  
        int y=0;  
        while(++x<5) y++;  
        System.out.println(y);  
    }  
}
```

Please choose only one answer:

- 0
- 3
- 4
- Compilation error

Check this Question online on JavaChamp.com: [Java local variables initialization](#)

1.11.6. How to call java static method?

What is the result of compiling and running the following program?

```
public class Tester {  
  
    public static void print(Integer arg){  
        System.out.print("Integer");  
    }  
  
    public void print(int arg){  
        System.out.print("int");  
    }  
  
    public static void main(String[] args) {  
        print(new Integer(3));  
    }  
}
```

Please choose only one answer:

- int
- Integer
- RuntimeException is thrown at run time
- Compilation error

Check this Question online on JavaChamp.com: [How to call java static method?](https://www.java-champ.com/question/how-to-call-java-static-method/)

1.11.7. how to declare valid java variable?

Which of the following is a valid variable declaration?

Please choose all the answers that apply:

- `int _javaChamp;`
- `int _&%javaChamp;`
- `int &javaChamp;`
- `int 2009JavaChamp;`
- `int $JavaChamp;`

Check this Question online on JavaChamp.com: [how to declare valid java variable?](#)

1.11.8. How to write a java bean?

Which of the following methods follows the JavaBeans standards?

Please choose all the answers that apply:

- `public void addJCListener(JCListener listener)`
- `void setName(String name)`
- `public void removeJCListener(MCListener listener)`
- `public boolean isDeleted()`
- `public void fetchName(String name)`

Check this Question online on JavaChamp.com: [How to write a java bean?](#)

1.11.9. What is java local variables scope?

What is the result of compiling and running the following code?

```
public class Tester {  
  
    public static void main(String[] args) {  
        if(true){  
            int x = 5;  
            System.out.print(x);  
        } else {  
            ++x;  
            System.out.print(x);  
        }  
    }  
}
```

Please choose only one answer:

- 5
- 56
- 6
- Compilation error

Check this Question online on JavaChamp.com: [What is java local variables scope?](#)

1.11.10. How to pass variables in java?

What is the result of compiling and running the following code?

```
public class Tester {  
    int x = 12;  
    static void reset( Tester obj){  
        obj = null;  
    }  
    public static void main(String[] args) {  
        Tester o1 = new Tester();  
        reset(o1);  
        System.out.print(o1.x);  
    }  
}
```

Please choose only one answer:

- 0
- 12
- Compilation error
- NullPointerException is thrown
- Another type of exception is thrown

Check this Question online on JavaChamp.com: [How to pass variables in java?](#)

1.11.11. How variables are passed in java?

What is the result of compiling and running the following code?

```
public class Tester {  
    int x = 12;  
  
    static Tester reset( Tester obj) {  
        obj = null;  
        return obj;  
    }  
  
    public static void main(String[] args) {  
        Tester o1 = new Tester();  
        o1 = reset(o1);  
        System.out.print(o1.x);  
    }  
}
```

Please choose only one answer:

- 0
- 12
- Compilation error
- NullPointerException is thrown
- Another type of exception is thrown

Check this Question online on JavaChamp.com: [How variables are passed in java?](https://www.java-champ.com/question/how-variables-are-passed-in-java/)

1.11.12. How to use java final variable?

What is the result of compiling and running the following code?

```
public class Tester {  
    final short s = 12; // Line 3  
  
    static void swap( Tester obj) {  
        obj.s = 11; // Line 6  
    }  
  
    public static void main(String[] args) {  
        final Tester obj1 = new Tester();  
        swap(obj1);  
        System.out.print(obj1.s); // Line 12  
    }  
}
```

Please choose only one answer:

- 11
- 12
- Compilation error at line 3
- Compilation error at line 6
- Compilation error at line 12

Check this Question online on JavaChamp.com: [How to use java final variable?](#)

12. Wrappers and Autoboxing

Exam Category Description and Objectives

1.12.1. Invoking equals() on java primitive type

What is the result of compiling and running the following code?

```
public class Tester {  
    public static void main(String[] args) {  
        Integer sum1 = 125; //line 1  
        int sum2 = 125; //line 2  
  
        System.out.print(sum1.equals(sum2)); //line 3  
        System.out.print(sum2.equals(sum1)); //line 4  
        System.out.print(sum1==sum2); //line 5  
    }  
}
```

Please choose only one answer:

- Compilation error at line 3
- Compilation error at line 4
- truefalse
- truefalse

Check this Question online on JavaChamp.com: [invoking equals\(\) on java primitive type](#)

1.12.2. var-args vs autoboxing in java

Which, inserted independently at // insert code here , will compile?

```
public class Tester {  
    // insert code here  
  
    public static void main(String[] args) {  
        calculate(12);  
    }  
}
```

Please choose all the answers that apply:

- static void calculate(Double i) {}
- static void calculate(Integer i) {}
- static void calculate(int i) {}
- static void calculate(int... i) {}
- static void calculate(Integer... i) {}

Check this Question online on JavaChamp.com: [var-args vs autoboxing in java](#)

1.12.3. How does java autoboxing work?

Given that Long and Integer extend Number, what is the result of compiling and running the following code?

```
public class Tester {  
    public static void main(String[] args) {  
        Number x = 12; // Line 5  
        Number y = (Long) x; // Line 6  
        System.out.print(x+""+y); // Line 7  
    }  
}
```

Please choose only one answer:

- 1212
- Compilation error at line 5
- Compilation error at line 6
- Compilation error at line 7
- An exception is thrown at run time

Check this Question online on JavaChamp.com: [How does java autoboxing work?](#)

1.12.4. How does autoboxing work in java?

What causes the compilation to fail?

```
public class Tester {  
    public static void main(String[] args) {  
        Long var = (long) 999; // Line 3  
        long x1 = var.longValue(); // Line 5  
        double x2 = var.longValue(); // Line 7  
        double x3 = (double) var.longValue(); // Line 9  
        Double x4 = Long.valueOf("999"); // Line 11  
        Number x5 = Integer.parseInt("999"); // Line 13  
        Long x6 = Integer.parseInt("999"); // Line 15  
    }  
}
```

Please choose all the answers that apply:

- Line 3
- Line 5
- Line 7
- Line 9
- Line 11
- Line 13
- Line 15

Check this Question online on JavaChamp.com: [How does autoboxing work in java?](#)

1.12.5. How to compare between java wrappers?

Given the following code fragment, what is true about the following System.out statements?

```
public class Tester {  
  
    public static void main(String[] args) {  
        Integer[][] arr1 = { { 1, 2 }, { 3, 4 } };  
        Number[] arr2 = arr1[0];  
        int x = 1;  
  
        System.out.print(arr1[0][0] == 1);  
        System.out.print(arr2[0] == x);  
        System.out.print(x instanceof Integer);  
        System.out.print(arr1[1][0] > (Integer) arr2[0]);  
    }  
}
```

Please choose only one answer:

- All statements will compile
- Only one will compile and will print true
- Only two statements will compile and both will print true
- Only three statements will compile, only two of them will print true

Check this Question online on JavaChamp.com: [How to compare between java wrappers?](https://www.java-champ.com/question/1.12.5-how-to-compare-between-java-wrappers/)

13. Garbage Collection

Exam Category Description and Objectives

1.13.1. When java object is eligible for garbage collection?

How many objects are eligible for garbage collection after executing line 7?

```
public class Tester {  
    public static void main(String[] args) {  
        Integer x = new Integer(3000);  
        Integer y = new Integer(4000);  
        Integer z = new Integer(5000);  
  
        Object a = x;  
        x = y;  
        y = z;  
        z = null; //line 7  
    }  
}
```

Please choose only one answer:

- 0
- 1
- 2
- 3

Check this Question online on JavaChamp.com: [When java object is eligible for garbage collection?](#)

1.13.2. What makes java object eligible for garbage collection?

What can be inserted at // insert code here, to make object created at line 5 eligible for garbage collection?

```
public static void main(String[] args) {  
    Integer[] arr = new Integer[3];  
    arr[0] = new Integer("3"); // Line 5  
    Integer x = arr[0];  
    // insert code here  
}
```

Please choose only one answer:

- arr[0] = null;
- x = null;
- arr = null;
- All of the above

Check this Question online on JavaChamp.com: [What makes java object eligible for garbage collection?](#)

1.13.3. when does an object become subject to garbage collection in java?

An object is subject to garbage collection in java :

Please choose only one answer:

- when the program is at a point of execution that is out the scope of the object
- when the object is set to null
- when the object becomes unreachable

Check this Question online on JavaChamp.com: [when does an object become subject to garbage collection in java?](#)

14. Overriding and Overloading

Exam Category Description and Objectives

1.14.1. Java overloading rules

What modifications are needed to produce the following output : SubType

```
class Type {
    public Object getTypeName(){
        return "Type";
    }
}

class SubType extends Type {
    public String getTypeName(){//line 8
        return "SubType";
    }
}

public class Tester {

    public static void main(String[] args) {
        Type first = new SubType(); //line 16
        System.out.println(first.getTypeName()); //line 17
    }
}
```

Please choose only one answer:

- No modification is needed
- At line 8 change the return type from String to Object to be a correct overloading of getTypeName()
- At line 16 change Type to SubType
- At line 17 cast first.getTypeName() to String

Check this Question online on JavaChamp.com: [Java overloading rules](#)

1.14.2. Can override java final method?

What is the result of compiling and running the following code?

```
class Base {
public final int getNext(int i) {
    return ++i;
}
}

public class Derived extends Base {

public int getNext(int i) {
    return i++;
}

public static void main(String[] args) {
    int result = new Derived().getNext(3);
    System.out.print(result);
    result = new Base().getNext(3);
    System.out.print(result);
}
}
```

Please choose only one answer:

- 33
- 34
- 44
- 43
- Compilation error

Check this Question online on JavaChamp.com: [Can override java final method?](#)

1.14.3. Overriding rules in java

Which statement(s), inserted independently at // insere code here, will compile?

```
class Creature {
    Creature getIt() {
        return this;
    }
}

class Bird extends Creature {
    // insere code here
}

class Falcon extends Bird {
}
```

Please choose all the answers that apply:

- Creature getIt() { return this;}
- private Falcon getIt() { return new Falcon();}
- Falcon getIt() {return this;}
- public Bird getIt() {return this;}
- Creature getIt(Creature c) {return this;}

Check this Question online on JavaChamp.com: [Overriding rules in java](#)

1.14.4. var-args vs widening vs autoboxing in java

What is the result of compiling and running the following code?

```
public class Tester {  
  
    static void call(Long x, Long y) {  
        System.out.print("Long x, Long y");  
    }  
  
    static void call(int... x) {  
        System.out.print("int... x");  
    }  
  
    public static void main(String[] args) {  
        int val = 3;  
        call(val, val);  
    }  
}
```

Please choose only one answer:

- Long x, Long y
- int... x
- Compilation error
- An exception is thrown at run time

Check this Question online on JavaChamp.com: [var-args vs widening vs autoboxing in java](#)

1.14.5. var-args vs autoboxing vs widening in java

What is the result of compiling and running the following code?

```
public class Tester {  
  
    static void call(Long x, Long y) {  
        System.out.print("Long x, Long y");  
    }  
  
    static void call(int... x) {  
        System.out.print("int... x");  
    }  
  
    static void call(Number x, Number y) {  
        System.out.print("Number x, Number y");  
    }  
  
    public static void main(String[] args) {  
        int val = 3;  
        call(val, val);  
    }  
}
```

Please choose only one answer:

- Long x, Long y
- int... x
- Number x, Number y
- Compilation error
- An exception is thrown at run time

Check this Question online on JavaChamp.com: [var-args vs autoboxing vs widening in java](#)

1.14.6. How to override method with exceptions in java?

Which, inserted independently at //insert overridden call() here, will represent an overridden call() and compile with no error?

```
class Base {  
    void call() throws IllegalArgumentException {  
    }  
}  
  
public class Derived extends Base {  
    //insert overridden call() here  
}
```

Please choose all the answers that apply:

- public void call() throws IllegalArgumentException {}
- void call() throws IllegalArgumentException,FileNotFoundException {}
- void call() throws RuntimeException {}
- void call() throws IllegalArgumentException,RuntimeException { }
- private void call() {}

Check this Question online on JavaChamp.com: [How to override method with exceptions in java?](#)

1.14.7. final parameters when overriding

What is the result of compiling and running the following code?

```
class Base {
    public void method(final int x) {
        System.out.print("Base");
    }
}

public class Derived extends Base {

    public void method(int x) { // line 1
        System.out.print("Derived");
    }

    public static void main(String[] args) {
        Base b = new Derived();
        b.method(3);
    }
}
```

Please choose only one answer:

- will compile fine and will print "Derived"
- will compile fine and will print "Base"
- Won't compile because of line 1. Can be corrected by marking x as final, then the output will be "Derived"
- Won't compile because of line 1. Can be corrected by marking x as final, then the output will be "Base"

Check this Question online on JavaChamp.com: [final parameters when overriding](#)

15. Collections

Exam Category Description and Objectives

1.15.1. How to use java headMap?

What is the output of compiling and running the following program?

```
import java.util.NavigableMap;
import java.util.TreeMap;

public class Tester {

    public static void main(String[] args) {

        TreeMap tree = new TreeMap();
        tree.put("aa", 1);
        tree.put("cc", 2);
        tree.put("ee", 3);
        tree.put("gg", 4);

        NavigableMap nvMap = tree.headMap("ee", false);
        nvMap.put("nn", 5); // line 16
        System.out.println(nvMap);

    }
}
```

Please choose only one answer:

- {aa=1, cc=2, ee=3}
- {aa=1, cc=2, ee=3, nn=5}
- Compilation error at line 16
- Exception is thrown at line 16

Check this Question online on JavaChamp.com: [How to use java headMap?](#)

1.15.2. What does java headMap() do?

What is the output of compiling and running the following program?

```
import java.util.NavigableMap;
import java.util.TreeMap;

public class Tester{

    public static void main(String[] args) {
        TreeMap tree = new TreeMap();
        tree.put("aa", 1);
        tree.put("cc", 2);
        tree.put("ee", 3);
        tree.put("gg", 4);

        NavigableMap nvMap = tree.headMap("ee", false);
        System.out.print(nvMap);

    }
}
```

Please choose only one answer:

- {aa=1, cc=2}
- {aa=1, cc=2, ee=3}
- {aa=1, cc=2, ee=3, gg=4}
- No output is produced
- Compilation error

Check this Question online on JavaChamp.com: [What does java headMap\(\) do?](#)

1.15.3. how to sort java TreeSet?

What is the result of compiling and running the following code?

```
import java.util.Arrays;
import java.util.Set;
import java.util.TreeSet;

public class Tester extends Thread {

    public static void main(String[] args) {
        Integer[] arr = {7,5,7,3};
        Set<Integer> set = new TreeSet<Integer>(Arrays.asList(arr));
        set.add(4);
        for(Integer value: set){
            System.out.print(value);
        }
    }
}
```

Please choose only one answer:

- Compilation error
- 75734
- 3457
- 34577

Check this Question online on JavaChamp.com: [how to sort java TreeSet?](#)

16. Generics

Exam Category Description and Objectives

1.16.1. How to declare instantiate java generic collection?

What is the result of compiling and running the following program?

```
import java.util.ArrayList;
import java.util.List;

public class Tester {

    public static void main(String[] args) {

        List<String> list1 = new ArrayList<String>();//line 1
        List<Object> list2 = list1;//line 2
        list2.add(new Integer(12));//line 3
        System.out.println(list2.size());//line 4

    }
}
```

Please choose only one answer:

- Compilation error at line 1, must initialize the size
- Compilation error at line 2, Type mismatch, cannot convert from List<String> to List<Object>
- Compilation error at line 3, can add objects of type String only
- 1

Check this Question online on JavaChamp.com: [How to declare instantiate java generic collection?](#)

1.16.2. How to add to java generic collection?

What is the result of compiling and running the following program?

```
import java.util.ArrayList;
import java.util.List;

interface chewable {}

class Gum implements chewable {}

public class Tester {

    public static void main(String[] args) {
        List<Gum> list1 = new ArrayList<Gum>();
        list1.add(new Gum());
        List list2 = list1;
        list2.add(new Integer(9));
        System.out.println(list2.size());
    }
}
```

Please choose only one answer:

- Compilation error
- 2 will be printed but with warnings
- 2 will be printed without warnings
- An exception will be thrown at runtime

Check this Question online on JavaChamp.com: [How to add to java generic collection?](#)

1.16.3. How to declare java generic collection?

What is the result of compiling and running the following program?

```
import java.util.ArrayList;
import java.util.List;

interface chewable {}

class Gum implements chewable {}

class Meat implements chewable {}

public class Tester {

    public static void main(String[] args) {
        List list1 = new ArrayList<chewable>(); // line 1
        list1.add(new Gum()); // line 2
        list1.add(new Meat()); // line 3
        list1.add(new Integer(9)); // line 4
        System.out.println(list1.size()); // line 5
    }
}
```

Please choose only one answer:

- Compilation error at line 1
- Compilation error at line 4
- Runtime exception thrown at line 1
- Runtime exception thrown at line 4
- 3

Check this Question online on JavaChamp.com: [How to declare java generic collection?](https://www.java-champ.com/question/how-to-declare-java-generic-collection/)

1.16.4. java generic collection rules?

Which of the following is a correct declaration and instantiation of list?

Please choose all the answers that apply:

- `List<String> list = new ArrayList<String>();`
- `List<?> list = new ArrayList<String>();`
- `List<? extends Object> list = new ArrayList<String>();`
- `List<Object> list = new ArrayList<String>();`
- `List list = new ArrayList<String>();`
- `List list = new ArrayList<?>();`

Check this Question online on JavaChamp.com: [java generic collection rules?](#)

1.16.5. When cannot add to a generic collection?

The following code contains a compilation error, at what line?

```
import java.util.ArrayList;
import java.util.List;

interface Chewable {}
class Meat implements Chewable {}

public class Tester {

    public static void main(String[] args) {

        List<? extends Chewable> list1 = new ArrayList<Meat>(); // Line 11

        List<Chewable> list2      = new ArrayList<Chewable>(); // Line 13

        Meat meat = new Meat();

        list1.add(meat); // Line 17

        list2.add(meat); // Line 19
    }
}
```

Please choose only one answer:

- Line 11
- Line 13
- Line 17
- Line 19

Check this Question online on JavaChamp.com: [When cannot add to a generic collection?](#)

1.16.6. Proper instantiation of java generic collection

The following program contains two compilation errors, at what lines?

```
import java.util.ArrayList;
import java.util.List;

interface Chewable {}
class Meat implements Chewable {}

public class Tester {

    public static List<? extends Chewable> printSize(List<? extends Chewable> list) { // Line 10
        System.out.println(list.size());
        return list;
    }
    public static void main(String[] args) {

        List<? extends Chewable> list1 = new ArrayList<Meat>(); // Line 16
        List<Chewable> list2 = new ArrayList<Chewable>(); // Line 17
        List<Meat> list3 = new ArrayList<Meat>(); // Line 18

        list1 = printSize(list1); // Line 20
        list2 = printSize(list2); // Line 21
        list3 = printSize(list3); // Line 22

    }
}
```

Please choose all the answers that apply:

- Line 10
- Line 16
- Line 17
- Line 18
- Line 20
- Line 21
- Line 22

Check this Question online on JavaChamp.com: [Proper instantiation of java generic collection](#)

17. Formatting

Exam Category Description and Objectives

1.17.1. writing java printf or format statement

Which of the following statements produces the output 3 + 8 ?

```
public class Tester {  
  
    public static void main(String[] args) {  
        int x = 8;  
        int y = 3;  
  
        System.out.printf("%d + %d \n", y, x); // stmt1  
        System.out.printf("%f + %f \n", (float) y, (float) x); // stmt2  
        System.out.printf("%d + %d \n", x, y); // stmt3  
        System.out.format("%2$d + %1$d", x, y); // stmt4  
    }  
}
```

Please choose all the answers that apply:

- Statement 1
- Statement 2
- Statement 3
- Statement 4

Check this Question online on JavaChamp.com: [writing java printf or format statement](#)

1.17.2. java classes instantiated using factory method

Which of the following is instantiated using a factory method ?

Please choose all the answers that apply:

- Date
- Calendar
- Locale
- DateFormat
- NumberFormat

Check this Question online on JavaChamp.com: [java classes instantiated using factory method](#)

18. I/O

Exam Category Description and Objectives

1.18.1. How to instantiate java PrintWriter?

Which of the following statements is a correct instantiation of PrintWriter?

Please choose all the answers that apply:

- `PrintWriter writer = new PrintWriter("file.dat");`
- `PrintWriter writer = new PrintWriter(new BufferedWriter("file.dat"));`
- `PrintWriter writer = new PrintWriter(new FileWriter("file.dat"));`
- `PrintWriter writer = new PrintWriter(new File("file.dat"));`

Check this Question online on JavaChamp.com: [How to instantiate java PrintWriter?](#)

1.18.2. How to create file in java?

At what line in the following program the file "data.txt" will be created in the file system?

```
import java.io.BufferedWriter;
import java.io.File;
import java.io.FileWriter;
import java.io.IOException;

public class Tester {

    public static void main(String[] args) {
        try {
            File file = new File("file.dat");// line 5
            file.createNewFile(); // line 6
            FileWriter fr = new FileWriter(file); // line 7
            BufferedWriter br = new BufferedWriter(fr); // line 8
            br.append("javachamp");
            br.flush();
            br.close(); // line 11
        } catch (IOException e) {
            e.printStackTrace();
        }
    }
}
```

Please choose only one answer:

- Line 5
- Line 6
- Line 7
- Line 8
- Line 11

Check this Question online on JavaChamp.com: [How to create file in java?](#)

1.18.3. What java exceptions thrown by File?

Given the following code segment enclosed within a try/catch block, what is the proper Exception type to catch causing no compilation error?

```
try {  
    File file = new File("file.dat");  
    file.createNewFile();  
}  
catch (  
    // INSERT EXCEPTION TYPE  
    e) {  
    e.printStackTrace();  
}
```

Please choose all the answers that apply:

- Exception
- RuntimeException
- Throwable
- FileNotFoundException
- IOException

Check this Question online on JavaChamp.com: [What java exceptions thrown by File?](#)

1.18.4. How to instantiate java BufferedWriter?

Which of the following is a correct instantiation for a BufferedWriter?

Please choose all the answers that apply:

- `BufferedWriter bw = new BufferedWriter(new File("data.txt"));`
- `BufferedWriter bw = new BufferedWriter(new FileWriter("data.txt"));`
- `BufferedWriter bw = new BufferedWriter(new PrintWriter("data.txt"));`
- `BufferedWriter bw = new BufferedWriter("data.txt");`

Check this Question online on JavaChamp.com: [How to instantiate java BufferedWriter?](#)

19. Threads

Exam Category Description and Objectives

1.19.1. How java thread start running?

What is considered an impossible output of running the following program?

```
public class Tester extends Thread {  
    int code = 9;  
  
    public void run() {  
        this.code = 7;  
    }  
  
    public static void main(String[] args) {  
  
        Tester thread = new Tester();  
        thread.start();  
  
        for (int i = 0; i < 5; i++) {  
            System.out.print(thread.code);  
        }  
  
    }  
}
```

Please choose only one answer:

- 99777
- 97777
- 77777
- 79999
- 99999

Check this Question online on JavaChamp.com: [How java thread start running?](#)

1.19.2. When java IllegalMonitorStateException is thrown?

What is the result of compiling and running the following program?

```
public class Tester {  
  
    public void validate() {  
        int i = 0;  
        while (++i < 3) {  
            try {  
                wait();  
            } catch (InterruptedException e) {  
                e.printStackTrace();  
            }  
            System.out.print(i);  
        }  
    }  
  
    public static void main(String[] args) {  
        new Tester().validate();  
    }  
}
```

Please choose only one answer:

- Compilation error because of calling wait() outside a synchronized block
- Compilation error because IllegalMonitorStateException is not handled
- At runtime, it throws an IllegalMonitorStateException when trying to wait
- 12

Check this Question online on JavaChamp.com: [When java IllegalMonitorStateException is thrown?](#)

1.19.3. Can java thread invoke start more than once?

What is the result of compiling and running the following code?

```
public class Tester extends Thread {  
    public void run() {  
        System.out.print("run");  
    }  
  
    public static void main(String[] args) {  
        Tester thread = new Tester();  
        new Thread(thread).start();  
        new Thread(thread).start();  
    }  
}
```

Please choose only one answer:

- Compilation error, can't invoke start() twice
- runrun
- IllegalStateException will be thrown because of the second invoke to start()
- run

Check this Question online on JavaChamp.com: [Can java thread invoke start more than once?](#)

1.19.4. When java InterruptedException is thrown?

What could be a part of the output of compiling and running the following code?

```
public class Tester extends Thread {  
  
    public void run() {  
        System.out.println("run");  
    }  
  
    public static void main(String[] args) {  
        Thread thread = new Tester();  
        thread.run();  
        thread.start();  
        thread.start();  
    }  
}
```

Please choose all the answers that apply:

- Compilation error
- Prints "run" twice, not necessarily consecutively
- InterruptedException will be thrown
- InterruptedException will be thrown
- Prints "run" three times

Check this Question online on JavaChamp.com: [When java InterruptedException is thrown?](#)

1.19.5. which thread methods are static?

Which of the following methods defined in Thread class are static?

Please choose all the answers that apply:

- sleep()
- start()
- yield()
- join()
- run()

Check this Question online on JavaChamp.com: [which thread methods are static?](#)

1.19.6. which methods are defined in calss object?

Which methods are defined in calss Object?

Please choose all the answers that apply:

- wait()
- sleep()
- toString()
- finalize()
- notify()

Check this Question online on JavaChamp.com: [which methods are defined in calss object?](#)

1.19.7. when to override thread method run()?

When a class implements interface Runnable, it must provide implementation for method start():

Please choose only one answer:

- False
- True

Check this Question online on JavaChamp.com: [when to override thread method run\(\)?](#)

1.19.8. when a thread can call wait()?

A thread that calls the wait() method of an object, must own the lock of the object.

Please choose only one answer:

- True
- False

Check this Question online on JavaChamp.com: [when a thread can call wait\(\)?](#)

1.19.9. how can a thread own the lock of an object?

How can a thread own the lock of an object?

Please choose all the answers that apply:

- When the thread executes a synchronized instance method of that object
- When the thread executes a synchronized statement block
- When the thread calls wait() on this object

Check this Question online on JavaChamp.com: [how can a thread own the lock of an object?](#)

1.19.10. how to instantiate a thread object?

Which of the following Thread instantiations are correct?

```
public static void main(String[] args) {  
    new Thread(); // line 1  
    new Thread("myThread"); // line 2  
    new Thread(new Long(14)); // line 3  
    new Thread(new Runnable(){public void run(){} }); // line 4  
    Thread.getInstance(); // line 5  
}
```

Please choose all the answers that apply:

- line 1
- line 2
- line 3
- line 4
- line 5

Check this Question online on JavaChamp.com: [how to instantiate a thread object?](https://www.java-champ.com/question/thread-instantiation/)

20. Enums

Exam Category Description and Objectives

1.20.1. how to declare java enum?

What is the result of compiling and running the following code?

```
enum Status {
    Published(1), Rejected(2); // Line 2
    int index; // Line 3
    Status(int i) { index = i; }
    int getIndex(){return index;} // Line 5
}

public class Tester {
    public static void main(String [] args) {
        System.out.println(Status.Published.index + Status.Rejected.index); // Line 10
    }
}
```

Please choose only one answer:

- Compilation error at line 2. Must be terminated by a colon ','
- Compilation error at line 3. index must be marked static
- Compilation error at line 5. must be marked public
- Compilation error at line 10, can't access index directly, must use getIndex() instead
- 3

Check this Question online on JavaChamp.com: [how to declare java enum?](#)

1.20.2. Where java enum can be defined?

enum can be declared and defined inside :

Please choose all the answers that apply:

- Another enum
- A class
- An interface
- A method

Check this Question online on JavaChamp.com: [Where java enum can be defined?](#)

21. Data Types

Exam Category Description and Objectives

1.21.1. Primitive Data types in java

What is the result of compiling and running the following code?

```
public class Tester {  
  
    static void test(float x) {  
        System.out.print("float");  
    }  
  
    static void test(double x) {  
        System.out.print("double");  
    }  
  
    public static void main(String[] args) {  
        test(99.9);  
    }  
}
```

Please choose only one answer:

- float
- double
- Compilation error
- Exception is thrown at run time

Check this Question online on JavaChamp.com: [Primitive Data types in java](#)

1.21.2. float data type in java

What is the result of compiling and running the following code?

```
public class Tester {  
  
    static void test(float x) {  
        System.out.print("float");  
    }  
  
    static void test(double x) {  
        System.out.print("double");  
    }  
  
    public static void main(String[] args) {  
        test((float) 99.9);  
    }  
}
```

Please choose only one answer:

- float
- double
- Compilation error
- Exception is thrown at run time

Check this Question online on JavaChamp.com: [float data type in java](#)

1.21.3. Data types in java

What is the result of compiling and running the following code?

```
public class Tester {  
  
    static void test(float x) {  
        System.out.print("float");  
    }  
  
    public static void main(String[] args) {  
        test(99.9);  
    }  
}
```

Please choose only one answer:

- float
- Compilation fails
- An Exception is thrown at run time

Check this Question online on JavaChamp.com: [Data types in java](#)

22. Static and init blocks

Exam Category Description and Objectives

1.22.1. In what order static and init blocks get called in java?

What is the result of compiling and running the following code?

```
class Bird {
    static {
        System.out.print("static1 ");
    }
    {
        System.out.print("init3 ");
    }
    public Bird() {
        System.out.print("Bird ");
    }
    static {
        System.out.print("static2 ");
    }
}

public class Falcon extends Bird {
    Falcon(){
        System.out.print("Falcon ");
    }
    public static void main(String[] args) {
        System.out.print("main ");
        new Falcon();
    }
}
```

Please choose only one answer:

- main static1 static2 init3 Bird Falcon
- main static1 static2 Falcon init3 Bird
- main static1 static2 Falcon Bird init3
- static1 static2 main init3 Bird Falcon
- static1 static2 main Bird init3 Falcon

Check this Question online on JavaChamp.com: [In what order static and init blocks get called in java?](#)

23. Serialization

Exam Category Description and Objectives

1.23.1. How to combine inheritance and serialization in java?

What is the result of compiling and running the following code?

```
import java.io.FileInputStream;
import java.io.FileOutputStream;
import java.io.ObjectInputStream;
import java.io.ObjectOutputStream;
import java.io.Serializable;

class Base {
    int code = 99;

    Base() {
        code = 77;
    }
}

public class Derived extends Base implements Serializable {

    public static void main(String[] args) {
        Derived derived1 = new Derived();
        derived1.code = 88;

        try {
            FileOutputStream fos = new FileOutputStream("data.txt");
            ObjectOutputStream os = new ObjectOutputStream(fos);
            os.writeObject(derived1);
            os.close();
            FileInputStream fis = new FileInputStream("data.txt");
            ObjectInputStream is = new ObjectInputStream(fis);
            Derived derived2 = (Derived) is.readObject();
            System.out.print(derived2.code);
            is.close();
        } catch (Exception x) {
        }

    }
}
```

Please choose only one answer:

- 0
- 77
- 88
- 99
- Compilation error

1.23.2. How to serialize java class?

Given the following two classes (Address and Account), what may happen if you attempt to serialize an instance of Account?

```
class Address{}  
class Account implements Serializable {Address address;}
```

Please choose only one answer:

- Compilation error
- Exception is thrown at run time
- Serialization will succeed correctly with no problems

Check this Question online on JavaChamp.com: [How to serialize java class?](#)

1.23.3. What variables cannot be serialized in java?

Which of the following members (variables) cannot be serialized?

Please choose all the answers that apply:

- private variables
- transient variables
- static variables
- final variables

Check this Question online on JavaChamp.com: [What variables cannot be serialized in java?](#)

1.23.4. What cannot be serialized in java?

What is the result of compiling and running the following code?

```
import java.io.FileInputStream;
import java.io.FileOutputStream;
import java.io.ObjectInputStream;
import java.io.ObjectOutputStream;
import java.io.Serializable;

public class Tester implements Serializable{

    transient int x = 5;

    public static void main(String[] args) {
        Tester tester1 = new Tester();
        try {
            ObjectOutputStream os = new ObjectOutputStream(
                new FileOutputStream("data.txt"));
            os.writeObject(tester1);
            os.close();
            System.out.print(++tester1.x + " ");
            ObjectInputStream is = new ObjectInputStream(new FileInputStream(
                "data.txt"));
            Tester tester2 = (Tester) is.readObject();
            is.close();
            System.out.println(tester2.x);
        } catch (Exception x) {
            System.out.println("Exception thrown");
        }
    }
}
```

Please choose only one answer:

- 5 5
- 6 5
- 6 0
- An exception is thrown

Check this Question online on JavaChamp.com: [What cannot be serialized in java?](#)

1. Chapter: C Programming Language

Chapter Description and Objectives

1. Basics

Exam Category Description and Objectives

1.1.1. Binary number system

The computer performs computations internally using

Please choose only one answer:

- Binary number system
- Decimal number system
- Hexadec. number system

Check this Question online on JavaChamp.com: [Binary number system](#)

1.1.2. c language

The C programming Language is

Please choose only one answer:

- Low level language
- High level language
- Machine language

Check this Question online on JavaChamp.com: [c language](#)

1.1.3. how to include in C?

the #include keyword in c language is:

Please choose only one answer:

- executive c statement
- compiler directive
- both correct

Check this Question online on JavaChamp.com: [how to include in C?](#)

1.1.4. How to write comments in C language?

How to write comments in C language?

Please choose only one answer:

- Use /* */ for multi-line comments
- Use // for single-line comments
- Both correct

Check this Question online on JavaChamp.com: [How to write comments in C language?](#)

1.1.5. main function in C

The main() function is:

Please choose only one answer:

- to write output to the screen
- the program entry point
- Both correct

Check this Question online on JavaChamp.com: [main function in C](#)

1.1.6. how to include a header in C?

To include a header file in a C program:

Please choose only one answer:

- `#include "stdio.h"`
- `#include <stdio.h>`
- Both correct

Check this Question online on JavaChamp.com: [how to include a header in C?](#)

1.1.7. include in C

To include a header file in a C program:

Please choose only one answer:

- `#include "stdio.h" ;`
- `#include "stdio.h"`
- Both correct

Check this Question online on JavaChamp.com: [include in C](#)

2. Arithmetic operators

Exam Category Description and Objectives

1.2.1. How to use Remainder operator in C?

what is the output of the following piece of code:

```
int c = 19 % 4;
```

Please choose only one answer:

- 1
- 2
- 3

Check this Question online on JavaChamp.com: [How to use Remainder operator in C?](#)

1.2.2. How to square a value in C?

To compute the square of the value in variable a:

Please choose only one answer:

- `b = a^2;`
- `z = a * a;`
- both correct

Check this Question online on JavaChamp.com: [How to square a value in C?](#)

1.2.3. How to increment in C?

What is the output of the following piece of code:

```
int x = 3, y = 5, z;  
z = ++x + ++y;  
printf("%d",z);
```

Please choose only one answer:

- 8
- 9
- 10

Check this Question online on JavaChamp.com: [How to increment in C?](#)

1.2.4. How to increment int in C?

What is the output of the following piece of code?

```
int x = 3, y = 5, z;  
z = x + ++y;  
printf("%d",z);
```

Please choose only one answer:

- 8
- 9
- 10

Check this Question online on JavaChamp.com: [How to increment int in C?](#)

1.2.5. How incrementation works in C?

What is the output of the following piece of code?

```
int x = 3, y = 5, z ;  
z = x++ + ++y;  
printf("%d",z);
```

Please choose only one answer:

- 8
- 9
- 10

Check this Question online on JavaChamp.com: [How incrementation works in C?](#)

1.2.6. How sqrt method works in C?

```
printf("%f", sqrt(sqrt (x)));
```

Please choose only one answer:

- is correct
- has syntax error
- causes run-time error

Check this Question online on JavaChamp.com: [How sqrt method works in C?](#)

1.2.7. arithmetic operators in C

The value of z in the following statement:

```
int x = 9 , y = 2 , z = x / y;
```

Please choose only one answer:

- 4
- 4.5
- 5

Check this Question online on JavaChamp.com: [arithmetic operators in C](#)

1.2.8. post increment in C

A short-cut for the statement: `x = x + 1;`

Please choose only one answer:

- `x += 1;`
- `x++;`
- Both correct

Check this Question online on JavaChamp.com: [post increment in C](#)

1.2.9. write method in C

choose the proper function to compute the cubic value of any input integer n:

Please choose only one answer:

- `int cube(void) { return (n * n * n) ; }`
- `int cube(int n) { return (n * n * n) ; }`
- `void cube(int n) { return (n * n * n) ; }`

Check this Question online on JavaChamp.com: [write method in C](#)

1.2.10. C arithmetic operators

To compute the cube of the value in variable x:

Please choose only one answer:

- `c = x * x * x;`
- `c = x^3;`
- Both correct

Check this Question online on JavaChamp.com: [C arithmetic operators](#)

1.2.11. decrementation in C

what is the output of the following piece of code

```
int a = 1, b = 2, c;  
c = a-- + b--;  
printf("%d",c);
```

Please choose only one answer:

- 3
- 4
- 5

Check this Question online on JavaChamp.com: [decrementation in C](#)

1.2.12. remainder operator in C

what is the output of the following piece of code

```
int z = 23 % 3;
```

Please choose only one answer:

- 7
- 2
- 30

Check this Question online on JavaChamp.com: [remainder operator in C](#)

3. Logical operators and Conditions

Exam Category Description and Objectives

1.3.1. How to find max value in C?

To find the max value between x,y :

Please choose only one answer:

- if (x > y) max = x;
else max = y;
- max = y;
if (x > y) max = x;
- both correct

Check this Question online on JavaChamp.com: [How to find max value in C?](#)

1.3.2. How to write if statement in C?

The operator = in the Boolean condition if(age = 3)

Please choose only one answer:

- assignment operator
- check for equality condition operator
- both correct

Check this Question online on JavaChamp.com: [How to write if statement in C?](#)

1.3.3. How to evaluate conditions in C?

What is the result of the condition (a && b) given the following declaration :

```
int a = 3 , b = 1 ;
```

Please choose only one answer:

- true
- false
- unknown

Check this Question online on JavaChamp.com: [How to evaluate conditions in C?](#)

1.3.4. How to evaluate C conditions?

What is the output of the following piece of code:

```
int x = 7;  
if ( x = 3 ) printf( "%d" , x);
```

Please choose only one answer:

- no output
- 7
- 3

Check this Question online on JavaChamp.com: [How to evaluate C conditions?](#)

1.3.5. How to write C if statement?

```
if ( 16 = m ) printf("m is 16");
```

Please choose only one answer:

- is correct
- has syntax error
- causes run-time error

Check this Question online on JavaChamp.com: [How to write C if statement?](#)

1.3.6. bit-wise AND operator in C

the & operator in the Boolean condition `if((x>5) & (y < 9)) ...`

Please choose only one answer:

- bit-wise AND operator
- address operator
- logical AND operator

Check this Question online on JavaChamp.com: [bit-wise AND operator in C](#)

1.3.7. logical AND operator in C

what is the result of the condition (x && y) given the declaration :

```
int x = 1 , y = 2 ;
```

Please choose only one answer:

- false
- unknown
- true

Check this Question online on JavaChamp.com: [logical AND operator in C](#)

1.3.8. bit-wise AND C operator

what is the result of the condition (x & y) given the declaration:

```
int x = 1 , y = 2 ;
```

Please choose only one answer:

- true
- unknown
- false

Check this Question online on JavaChamp.com: [bit-wise AND C operator](#)

1.3.9. how conditions evaluated in C

consider the following statement:

```
if( 7 ) printf("CHECK");
```

Please choose only one answer:

- the printf() statement will always be executed
- the printf() statement will never be executed
- Depends on the compiler

Check this Question online on JavaChamp.com: [how conditions evaluated in C](https://www.javachamp.com/question/how-conditions-evaluated-in-c)

4. Print out Statements

Exam Category Description and Objectives

1.4.1. How to print out in c?

To write string `char str[30] = "C Language";`
What to use?

Please choose only one answer:

- `printf("%s",str);`
- `puts(str);`
- Both correct

Check this Question online on JavaChamp.com: [How to print out in c?](#)

1.4.2. How to print out ASCII in c?

To write the ASCII code of char ch='x';

Please choose only one answer:

- `printf("%d",ch);`
- `putch(ch);`
- `printf("%d", ascii(ch));`

Check this Question online on JavaChamp.com: [How to print out ASCII in c?](#)

1.4.3. How to print out a character in C?

To print character a:

Please choose only one answer:

- `putch("a");`
- `putch('a');`
- Both correct

Check this Question online on JavaChamp.com: [How to print out a character in C?](#)

1.4.4. How to print out a String in C?

To write statement hi world:

Please choose only one answer:

- `puts('hi world');`
- `puts("hi world");`
- Both correct

Check this Question online on JavaChamp.com: [How to print out a String in C?](#)

1.4.5. print int in C

what is the best choice to print the value of variable x where:

```
int x = 123;
```

Please choose only one answer:

- `printf("%d",x);`
- `printf("%c",x);`
- `printf("%f",x);`

Check this Question online on JavaChamp.com: [print int in C](#)

1.4.6. printf float in C

what is the best choice to print the value of variable y where: float y = 2.34;

Please choose only one answer:

- `printf("%d",y);`
- `printf("%f",y);`
- `printf("%c",y);`

Check this Question online on JavaChamp.com: [printf float in C](#)

1.4.7. how to print double in C?

To write the value of x where:

```
double x = 0.12345;
```

Please choose only one answer:

- `printf("%lf " , x);`
- `printf("%f " , x);`
- `printf("%ld " , x);`

Check this Question online on JavaChamp.com: [how to print double in C?](#)

5. Flow Control

Exam Category Description and Objectives

1.5.1. How to write a for loop in C?

To write character array

```
char mystr[50] = "string", i = 0;
```

Please choose only one answer:

- `len = strlen (mystr);`
`for (i = 0 ; i < len ; i++) putchar(mystr [i]);`
- `for (i = 0 ; i < 50 ; i++) putchar(mystr [i]);`
- Both correct

Check this Question online on JavaChamp.com: [How to write a for loop in C?](#)

1.5.2. how to write while loop in C?

```
while (degree < 100 ); count+= degree;
```

Please choose only one answer:

- is correct and causes no runtime error
- has syntax error
- causes run-time error

Check this Question online on JavaChamp.com: [how to write while loop in C?](#)

1.5.3. using for loop in C

```
for(j=63 , i < 95 , i +=3) x += sqrt(j);
```

Please choose only one answer:

- is correct
- has syntax error
- causes run-time error

Check this Question online on JavaChamp.com: [using for loop in C](#)

1.5.4. while loop in C

```
while (degree < 100 ) count+= degree++;
```

Please choose only one answer:

- is correct
- has syntax error
- causes run-time error

Check this Question online on JavaChamp.com: [while loop in C](#)

1.5.5. how to write for loop in C?

consider the following statement:

```
for(;;);
```

Please choose only one answer:

- Depends on the compiler
- Syntax error
- Infinite loop

Check this Question online on JavaChamp.com: [how to write for loop in C?](#)

1.5.6. infinite loop in C

consider the following statement:

```
while ( 1 ) ;
```

Please choose only one answer:

- Infinite loop
- Syntax error
- Depends on the compiler

Check this Question online on JavaChamp.com: [infinite loop in C](#)

1.5.7. infinite while loop in C

consider the following statement:

```
while ( 3 ) ;
```

Please choose only one answer:

- Infinite loop
- Syntax error
- Executes only 3 iterations

Check this Question online on JavaChamp.com: [infinite while loop in C](#)

1.5.8. how to write switch in C?

What is the output of the following piece of code:

```
switch(2) {  
case 1: printf("One"); break;  
case 2: printf("Two");  
case 3: printf("Three"); break;  
}
```

Please choose only one answer:

- One
- Two
- TwoThree

Check this Question online on JavaChamp.com: [how to write switch in C?](#)

1.5.9. how switch works in C?

What is the output of the following piece of code:

```
switch(2) {  
case 1: printf("One"); break;  
case 2: printf("Two"); break;  
case 3: printf("Three"); break;  
}
```

Please choose only one answer:

- One
- Two
- TwoThree

Check this Question online on JavaChamp.com: [how switch works in C?](#)

1.5.10. how to write switch statement in C?

What is the output of the following piece of code:

```
switch(476) {  
case 1: printf("One"); break;  
case 2: printf("Two"); break;  
default: printf("Default"); break;  
}
```

Please choose only one answer:

- Default
- One
- Two

Check this Question online on JavaChamp.com: <https://www.java-champ.com/question/switch-statement-in-c/>

6. Inputs Reading

Exam Category Description and Objectives

1.6.1. How to read user inputs in C?

To get a statement from the user input in the array
char s[100] :

Please choose only one answer:

- gets(s);
- scanf("%s", s);
- Both correct

Check this Question online on JavaChamp.com: [How to read user inputs in C?](#)

1.6.2. How to read inputs into an array in C?

To get a statement from the user input in the array char s[100]:

Please choose only one answer:

- `gets(s[100]);`
- `gets(s[]);`
- `gets(s);`

Check this Question online on JavaChamp.com: [How to read inputs into an array in C?](#)

1.6.3. How to write C scanf?

```
scanf("%d", &time);
```

Please choose only one answer:

- is correct
- has syntax error
- causes run-time error

Check this Question online on JavaChamp.com: [How to write C scanf?](#)

1.6.4. read char in C

what is the best choice to input the value of variable c where: char c;

Please choose only one answer:

- `scanf("%d", &c);`
- `scanf("%f", &c);`
- `scanf("%c", &c);`

Check this Question online on JavaChamp.com: [read char in C](#)

7. Assignement

Exam Category Description and Objectives

1.7.1. How to convert between char and int in C?

To assign the value of integer x into character ch where:

```
int x = 5; char ch;
```

Please choose only one answer:

- `ch = x;`
- `ch = ascii(x);`
- `x = ch;`

Check this Question online on JavaChamp.com: [How to convert between char and int in C?](#)

8. Arrays

Exam Category Description and Objectives

1.8.1. How to declare and initialize character array in C?

To declare and initialize character array :

Please choose only one answer:

- `char s[] = { 'a', 'b' , 'c' };`
- `char s[] = "abc";`
- both correct

Check this Question online on JavaChamp.com: [How to declare and initialize character array in C?](#)

1.8.2. how to declare C arrays?

```
float values(200) = ( 1 , 2 , 3 , 4 );
```

Please choose only one answer:

- is correct
- has syntax error
- causes run-time error

Check this Question online on JavaChamp.com: [how to declare C arrays?](#)

1.8.3. declare char array in C

To declare and initialize character array:

Please choose only one answer:

- `char s[] = { 'a', 'b' , 'c' };`
- `char s[] = "abc";`
- both correct

Check this Question online on JavaChamp.com: [declare char array in C](#)

1.8.4. Arrays declaration in C

```
float values(200) = ( 1 , 2 , 3 , 4 );
```

Please choose only one answer:

- correct
- syntax error
- run-time error

Check this Question online on JavaChamp.com: [Arrays declaration in C](#)

9. Methods and Functions

Exam Category Description and Objectives

1.9.1. How to write a method in c?

What is the output of the following program:

```
int change( int x ) {  
    x = 7; return(x);  
}  
  
main(){  
    int x = 5;  
    change(x);  
    printf("%d",x);  
}
```

Please choose only one answer:

- 5
- 7
- unknown

Check this Question online on JavaChamp.com: [How to write a method in c?](#)

1.9.2. How to write and call method?

What is the output of the following program:

```
int sum( int x, int y ) {  
    return (x + y);  
}  
  
main(){  
    int x = 5 , y = 3;  
    printf("%d", sum(x,y));  
}
```

Please choose only one answer:

- 8
- unknown
- both wrong

Check this Question online on JavaChamp.com: [How to write and call method?](#)

1.9.3. How to write C method?

```
int multiply(int x, int y) {  
  
return x*y;  
  
}
```

Please choose only one answer:

- is correct
- has syntax error
- causes run-time error

Check this Question online on JavaChamp.com: [How to write C method?](#)

1.9.4. how to print int in C?

what is the output of the following program

```
main(){
  int x;
  printf("%d",x);
}
```

Please choose only one answer:

- Unknown (random value)
- Zero
- 3000

Check this Question online on JavaChamp.com: [how to print int in C?](#)

1.9.5. pass by value in C?

what is the output of the following program

```
int change( int x ) {  
    x = 7;  
}  
  
main(){  
    int x = 5;  
    change(x);  
    printf("%d",x);  
}
```

Please choose only one answer:

- 5
- 7
- unknown

Check this Question online on JavaChamp.com: [pass by value in C?](#)

1.9.6. return value in c method?

what is the output of the following program

```
int sum( int x, int y ) {  
    int z = x + y;  
}  
main(){  
    int x = 5 , y = 3;  
    printf("%d", sum(x,y));  
}
```

Please choose only one answer:

- 8
- unknown
- both wrong

Check this Question online on JavaChamp.com: [return value in c method?](#)

10. Identifiers and Variables

Exam Category Description and Objectives

1.10.1. legal Identifier rules in C

Which of the following identifiers is a legal identifier :

Please choose only one answer:

- 1abc
- abc 1
- abc1

Check this Question online on JavaChamp.com: [legal Identifier rules in C](#)

1.10.2. how to declare a valid variable in C?

Which of the following identifiers is a legal identifier:

Please choose only one answer:

- my mark
- my_mark
- my-mark

Check this Question online on JavaChamp.com: [how to declare a valid variable in C?](#)

1.10.3. how to declare C legal identifier?

Which of the following identifiers is a legal identifier?

Please choose only one answer:

- abc#*
- #+abc
- abc

Check this Question online on JavaChamp.com: [how to declare C legal identifier?](#)

1.10.4. How to declare C valid variable?

consider the following variables declaration statement:

```
int age, AGE;
```

Please choose only one answer:

- Correct statement, the compiler uses age and AGE as completely different variables.
- Correct statement, the compiler uses age and AGE as the same variable.
- Wrong statement, because you can't declare more than one variable with the same name.

Check this Question online on JavaChamp.com: [How to declare C valid variable?](#)

1.10.5. variable role in C

What is the role of variables in programming languages:

Please choose only one answer:

- Perform standard functions like printing to the screen
- Data storage
- Both correct

Check this Question online on JavaChamp.com: [variable role in C](#)

1.10.6. variable declaration in C

The variables in C programming language:

Please choose only one answer:

- Must be declared before being used.
- Can be used without declaration
- Can be used before declaration

Check this Question online on JavaChamp.com: [variable declaration in C](#)

1.10.7. how to define a constant in C?

To define a constant ABC with value 358:

Please choose only one answer:

- `#define ABC = 358`
- `#define ABC = 358 ;`
- `#define ABC 358`

Check this Question online on JavaChamp.com: [how to define a constant in C?](#)

11. Data Types

Exam Category Description and Objectives

1.11.1. different C data types

what is the best choice to store the natural number $\pi = 3.1459$

Please choose only one answer:

- `int pi = 3.1459;`
- `char pi = 3.1459;`
- `float pi = 3.1459;`

Check this Question online on JavaChamp.com: [different C data types](#)

1.11.2. Data types in C

what is the best choice to store the number of university students:

Please choose only one answer:

- `char n = 20000;`
- `float n = 20000;`
- `int n = 20000;`

Check this Question online on JavaChamp.com: [Data types in C](#)

1.11.3. float storage size in C

what is the storage size of the float data type (float)?

Please choose only one answer:

- 1 byte
- 2 byte
- 4 byte

Check this Question online on JavaChamp.com: [float storage size in C](#)

1.11.4. char storage size in C

what is the storage size of the integer data type (char)?

Please choose only one answer:

- 1 byte
- 2 byte
- 4 byte

Check this Question online on JavaChamp.com: [char storage size in C](#)

1.11.5. int storage size in C

what is the storage size of the float data type (int)?

Please choose only one answer:

- 1 byte
- 2 byte
- 4 byte

Check this Question online on JavaChamp.com: [int storage size in C](#)

1.11.6. how to assign int into char in C?

to assign the value of integer x into character ch where:

```
int x = 5;
```

```
char ch;
```

Please choose only one answer:

- `ch = x;`
- `ch = ascii(x);`
- `x = ch;`

Check this Question online on JavaChamp.com: [how to assign int into char in C?](#)

1.11.7. max value in number system

The highest digit in any number system equals:

Please choose only one answer:

- Zero
- Base - 1
- Base + 1

Check this Question online on JavaChamp.com: [max value in number system](#)

1.11.8. LSB in C

If LSB of a binary number is “0” then it is:

Please choose only one answer:

- Positive number
- Even number
- Odd number

Check this Question online on JavaChamp.com: [LSB in C](#)

1.11.9. MSB in C

If MSB of a binary number is "0" then it is:

Please choose only one answer:

- Odd number
- Even number
- Positive number

Check this Question online on JavaChamp.com: [MSB in C](#)

12. Strings

Exam Category Description and Objectives

1.12.1. How to copy a string into another in C?

To copy a string into another, given:

```
char s1[30] = "xyz", s2[20];
```

Please choose only one answer:

- `s2 = s1;`
- `strcpy(s2,s1);`
- Both wrong

Check this Question online on JavaChamp.com: [How to copy a string into another in C?](#)

1.12.2. how to concatenate strings in C?

to concatenate two strings into third string, given :

```
char s1[30] = "hi", s2[20] = "world", s3[10];
```

Please choose only one answer:

- `s3 = s1 + s2;`
- `strcpy(s3,s1); strcat(s3,s2);`
- `s3 = strcat(s1,s2);`

Check this Question online on JavaChamp.com: [how to concatenate strings in C?](#)

1. Chapter: Assembly Programming Language

Chapter Description and Objectives

1. Basics

Exam Category Description and Objectives

1.1.1. What is a debug program?

The Debug program is a small MS-DOS utility and is usually useful in:

Please choose only one answer:

- Writing sophisticated applications and systems
- Memory and disk management
- Testing and fixing programs

Check this Question online on JavaChamp.com: [What is a debug program?](#)

1.1.2. Who writes ROM BIOS contents ?

The ROM BIOS contents:

Please choose only one answer:

- Can be written by the DEBUG program
- Written by the ROM manufacturer and can not be changed
- Volatile and must be refreshed on computer power on

Check this Question online on JavaChamp.com: [Who writes ROM BIOS contents ?](#)

1.1.3. What does ROM BIOS contain?

The ROM BIOS contains:

Please choose only one answer:

- MS-Dos operating system
- MS-Windows operating system
- Basic input & output system routines

Check this Question online on JavaChamp.com: [What does ROM BIOS contain?](#)

1.1.4. What is first executed when starting the computer?

When you power on the computer it starts executing instructions in:

Please choose only one answer:

- ROM
- RAM
- Hard Disk

Check this Question online on JavaChamp.com: [What is first executed when starting the computer?](#)

1.1.5. Memory segments can start every?

Memory segments can start every:

Please choose only one answer:

- 1 paragraph (16 bytes)
- 1 word (2 bytes)
- 1 byte

Check this Question online on JavaChamp.com: [Memory segments can start every?](#)

1.1.6. what was max memory space by 8086 processor?

The maximum memory space addressable by 8086 processor was:

Please choose only one answer:

- 64 KB
- 640KB
- 1MB

Check this Question online on JavaChamp.com: [what was max memory space by 8086 processor?](#)

1.1.7. what was max memory space in 8086 processor?

The limitation on The maximum memory space addressable by 8086 processor because:

Please choose only one answer:

- The address bus width was 20 bits
- The register size was 16 bits
- It has only 14 registers

Check this Question online on JavaChamp.com: [what was max memory space in 8086 processor?](#)

1.1.8. What is maximum memory proportional to?

The maximum memory space addressable by a processor is proportional to:

Please choose only one answer:

- Register size
- Address bus width
- Number of registers

Check this Question online on JavaChamp.com: [What is maximum memory proportional to?](#)

1.1.9. What is the mapping between physical address and logical address?

The mapping between the physical address and logical address (Segment:Offset) is:

Please choose only one answer:

- One to one relation
- One to many relation
- No relation

Check this Question online on JavaChamp.com: [What is the mapping between physical address and logical address?](#)

1.1.10. What does the sign flag do?

The processor set the sign flag on when it detects

Please choose only one answer:

- The MSB of the result is 1
- Negative number in AX register
- Both (a) and (b) are correct

Check this Question online on JavaChamp.com: [What does the sign flag do?](#)

1.1.11. How can a physical address be represented?

The physical address 12345 can be represented by the logical address:

Please choose only one answer:

- 1234:5
- 1230:45
- Both (a) and (b) are correct

Check this Question online on JavaChamp.com: [How can a physical address be represented?](#)

1.1.12. How overflow by addition is handled?

If you add positive number plus negative number the overflow flag will be set if:

Please choose only one answer:

- The result is negative
- The result is positive
- There is no overflow when adding (+ve) + (-ve) numbers

Check this Question online on JavaChamp.com: [How overflow by addition is handled?](#)

1.1.13. How the processor compute the address of the next instruction?

The processor compute the address of the next instruction using

Please choose only one answer:

- CS:IP
- DS:IP
- CS:SP

Check this Question online on JavaChamp.com: [How the processor compute the address of the next instruction?](#)

1.1.14. What is cold boot?

power on the computer is called:

Please choose only one answer:

- Warm boot
- Cold boot
- both (a) and (b) are false

Check this Question online on JavaChamp.com: [What is cold boot?](#)

1.1.15. function service number (4Ch)

The function service number (4Ch) in interrupt (INT 21h):

Please choose only one answer:

- TSR terminate and stay resident
- Abnormal program Termination
- Normal program Termination

Check this Question online on JavaChamp.com: [function service number \(4Ch\)](#)

1.1.16. The assembly directive

The assembly directive is a command to:

Please choose only one answer:

- The Assembler program
- The Microprocessor
- both (a) and (b) are correct

Check this Question online on JavaChamp.com: [The assembly directive](#)

1.1.17. What is the value of AL register when using interrupt (INT 21h), service number (4Ch)?

The value in AL register when using interrupt (INT 21h), service number (4Ch) is:

Please choose only one answer:

- Completely ignored
- Depend on the value of AH register
- Return value to the calling program (usually DOS operating system)

Check this Question online on JavaChamp.com: [What is the value of AL register when using interrupt \(INT 21h\), service number \(4Ch\)?](#)

1.1.18. What is the difference between PSP and header block?

Compare between PSP and “header block”

Please choose only one answer:

- DOS generates PSP automatically preceding a COM program in the memory
- DOS stores the “header block” on the disk with the EXE program file
- both (a) and (b) are correct

Check this Question online on JavaChamp.com: [What is the difference between PSP and header block?](#)

1.1.19. how to initialize DS register?

You know that the data segment base address = 1234, so :how to initialize DS register?

Please choose only one answer:

- Mov DS,1234
- Mov AX,1234, Mov DS,AX
- both (a) and (b) are correct

Check this Question online on JavaChamp.com: [how to initialize DS register?](#)

1.1.20. how to initialize the IP register?

You want to initialize the IP register with the value 2000:

Please choose only one answer:

- `Mov IP,2000`
- `Jmp 2000`
- You can't change IP register

Check this Question online on JavaChamp.com: [how to initialize the IP register?](#)

1.1.21. How to move bytes from address to another?

You want to move two bytes from address 100 to 200, so what is the proper instruction:

Please choose only one answer:

- `Mov AX,[100], Mov [200],AX`
- `Mov AH,[100], Mov [200],AH`
- `Mov [200],[100]`

Check this Question online on JavaChamp.com: [How to move bytes from address to another?](#)

1.1.22. What is Register addressing mode?

What is the memory addressing mode of the first operand in the instruction `MOV BX,1234`:

Please choose only one answer:

- Register addressing mode
- Immediate addressing mode
- Indirect addressing mode

Check this Question online on JavaChamp.com: [What is Register addressing mode?](#)

1.1.23. what is Indirect addressing mode?

What is the memory addressing mode of the first operand in the instruction `MOV [BX],1234`:

Please choose only one answer:

- Indirect addressing mode
- Immediate addressing mode
- Register addressing mode

Check this Question online on JavaChamp.com: [what is Indirect addressing mode?](#)

1.1.24. AX register

What is the value of AX register after executing, `MOV AX,456h, CMP AX,456h`

Please choose only one answer:

- 456h
- Zero
- Unknown

Check this Question online on JavaChamp.com: [AX register](#)

1.1.25. How to set only odd numbered bits in AX register?

You want to set only odd numbered bits in AX register, so what is the proper instruction:

Please choose only one answer:

- `Mov AX,5555h`
- `OR AX,5555h`
- `AND AX,5555h`

Check this Question online on JavaChamp.com: [How to set only odd numbered bits in AX register?](#)

1.1.26. how to complement only odd numbered bits in AX register?

You want to complement only odd numbered bits in AX register, so what is the proper instruction:

Please choose only one answer:

- Test AX,5555h
- AND AX,5555h
- XOR AX,5555h

Check this Question online on JavaChamp.com: [how to complement only odd numbered bits in AX register?](#)

1.1.27. AX register in assembly

What is the value of AX register after the following instruction, assume Mark stored at offset 1000

```
Mark DW 123
```

```
Mov AX,Mark
```

Please choose only one answer:

- 1000
- 123
- Unknown

Check this Question online on JavaChamp.com: [AX register in assembly](#)

1.1.28. AX register assembly

What is the value of AX register after the following instructions, assume Mark at offset 1000

Mark DW 123

LEA AX,Mark

Please choose only one answer:

- 1000
- 123
- Unknown

Check this Question online on JavaChamp.com: [AX register assembly](#)

1.1.29. What is the value of over flow flag after SUB AX AX

What is the value of over flow (O) flag after the instruction: SUB AX,AX

Please choose only one answer:

- Set
- Cleared
- Unknown

Check this Question online on JavaChamp.com: [What is the value of over flow flag after SUB AX AX](#)

1.1.30. What is the value of Zero flag after SUB AX AX

What is the value of Zero (Z) flag after the instruction: SUB AX,AX

Please choose only one answer:

- Set
- Cleared
- Unknown

Check this Question online on JavaChamp.com: [What is the value of Zero flag after SUB AX AX](#)

1.1.31. From where operating system is loaded?

The operating system (DOS / Windows) generally loaded (system boot) from:

Please choose only one answer:

- ROM
- RAM
- Hard/ Floppy Disk

Check this Question online on JavaChamp.com: [From where operating system is loaded?](#)

1.1.32. When will auxiliary flag be set?

The auxiliary flag will be set if:

Please choose only one answer:

- Both bits number 4,5 are set to 1
- There is a carry / borrow between bits number 4,5
- Both correct

Check this Question online on JavaChamp.com: [When will auxiliary flag be set?](#)

1.1.33. What are the operating system functions?

The operating system functions:

Please choose only one answer:

- System boot
- Running applications
- Both correct

Check this Question online on JavaChamp.com: [What are the operating system functions?](#)

1.1.34. How many segments .COM programs in RAM use?

The .COM programs in RAM uses:

Please choose only one answer:

- 1 segment
- 4 different segments (code, data, stack, and extra)
- More than 4

Check this Question online on JavaChamp.com: [How many segments .COM programs in RAM use?](#)

1.1.35. Who generates PSP for .COM programs?

Who generates PSP for .COM programs:

Please choose only one answer:

- DOS generates PSP automatically preceding a COM program in the memory
- The program itself
- DOS load it from the disk

Check this Question online on JavaChamp.com: [Who generates PSP for .COM programs?](#)

1.1.36. Why the limitation on The maximum memory space by 8086 processor?

The limitation on The maximum memory space addressable by 8086 processor because:

Please choose only one answer:

- It has only 14 registers
- The register size was 16 bits
- The address bus width was 20 bits

Check this Question online on JavaChamp.com: [Why the limitation on The maximum memory space by 8086 processor?](#)

1.1.37. What is the multiple Segment Offset representations for a unique physical address?

The multiple Segment:Offset representations for a unique physical address is:

Please choose only one answer:

- Advantage for 8086 processor to provide flexibility
- disadvantage for 8086 processor, it make it harder to program
- Has no effect

Check this Question online on JavaChamp.com: [What is the multiple Segment Offset representations for a unique physical address?](#)

1.1.38. What is assembly directive?

The assembly directive is a command to:

Please choose only one answer:

- The Assembler program
- The Microprocessor
- both (a) and (b) are correct

Check this Question online on JavaChamp.com: [What is assembly directive?](#)

1.1.39. How to display the contents of 100 bytes?

To display the contents of 100 bytes starting at physical address 00000 using the debug:

Please choose only one answer:

- `-d 0 FF`
- `-d 0:0 FF`
- `-d 0:0 0:FF`

Check this Question online on JavaChamp.com: [How to display the contents of 100 bytes?](#)

1.1.40. What is the memory addressing mode?

Consider the program segment:

Age DB 100

MOV Age,123

What is the memory-addressing mode of the first operand in the MOV instruction?

Please choose only one answer:

- Immediate addressing mode
- direct addressing mode
- Indirect addressing mode

Check this Question online on JavaChamp.com: [What is the memory addressing mode?](#)

1.1.41. debug command -E

the debug command: -E F000:0 1 2 3

Please choose only one answer:

- Has no effect, because that location in ROM
- Will write three bytes (1,2,3) starting at location F000:0
- Depends on the processor

Check this Question online on JavaChamp.com: [debug command -E](#)

1.1.42. debug command U

The debug command U

Please choose only one answer:

- Retrieve the assembly program instructions from the disk
- Retrieve the assembly program instructions from the RAM
- Convert the machine code stored in memory into assembly equivalent

Check this Question online on JavaChamp.com: [debug command U](#)

1.1.43. max size of .COM program

The max size of .COM program:

Please choose only one answer:

- Any size
- 1 paragraph (16 bytes)
- 1 segment (64k bytes)

Check this Question online on JavaChamp.com: [max size of .COM program](#)

1.1.44. Command DB

The statement AGE DB 25

Please choose only one answer:

- Instructs the processor to store the value 25 into AX register
- Instructs the assembler to store the value 25 into RAM, and use AGE as a reference
- Both correct

Check this Question online on JavaChamp.com: [Command DB](#)

1.1.45. How to increment a register?

To increment both AL, AH registers:

Please choose only one answer:

- INC AX
- INC AL INC AH
- both (a) and (b) are correct

Check this Question online on JavaChamp.com: [How to increment a register?](#)

1.1.46. how many segment you can use for .com program?

To write assembly program that generates .COM program, how many segment you can use:

Please choose only one answer:

- Only Code
- Code & Data
- Code & Data & Stack

Check this Question online on JavaChamp.com: [how many segment you can use for .com program?](#)

1.1.47. Stack segment in .COM program

What about the Stack segment in .COM program during execution:

Please choose only one answer:

- Must be defined explicitly in the program
- DOS uses the high area of the COM program for the Stack
- There is no stack for .COM program during execution

Check this Question online on JavaChamp.com: [Stack segment in .COM program](#)

1.1.48. instruction AND AH

The instruction AND AH,11110111 is equivalent to:

Please choose only one answer:

- Sub AH, 8, if 4th bit of AH is set
- Sub AH, 8, if 4th bit of AH is cleared
- Sub AH, 4, if 4th bit of AH is set

Check this Question online on JavaChamp.com: [instruction AND AH](#)

1.1.49. MOV and CMP AX register

What is the value of AX register after executing, MOV AX,456h, CMP AX,456h

Please choose only one answer:

- 456h
- Zero
- Unknown

Check this Question online on JavaChamp.com: [MOV and CMP AX register](#)

1.1.50. Memory segments

Memory segments can start every:

Please choose only one answer:

- 1 paragraph (16 bytes)
- 1 word (2 bytes)
- 1 byte

Check this Question online on JavaChamp.com: [Memory segments](#)

1.1.51. How many bytes in one word?

How many bytes in one word

Please choose only one answer:

- 1 byte
- 2 byte
- 4 byte

Check this Question online on JavaChamp.com: [How many bytes in one word?](#)

1.1.52. How many bits in one byte?

How many bits in one byte?

Please choose only one answer:

- 8 bits
- 16 bits
- 32 bits

Check this Question online on JavaChamp.com: [How many bits in one byte?](#)

1.1.53. logical operator AND

The result of logical operation: 1 AND 1

Please choose only one answer:

- logic 1
- logic 0

Check this Question online on JavaChamp.com: [logical operator AND](#)

1.1.54. cpu Accumulator register

The AX register full name is:

Please choose only one answer:

- Accumulator register
- Counter register
- Base register

Check this Question online on JavaChamp.com: [cpu Accumulator register](#)

1.1.55. logical operator OR

The result of logical operation: 1 OR 0

Please choose only one answer:

- 0
- 1

Check this Question online on JavaChamp.com: [logical operator OR](#)

1.1.56. logical operator XOR

The result of logical operation: 1 XOR 1

Please choose only one answer:

- logic 0
- logic 1

Check this Question online on JavaChamp.com: [logical operator XOR](#)

1.1.57. length of the 8088 processor physical address

What is the length of the 8088's physical address?

Please choose only one answer:

- 8 bits
- 16 bits
- 20 bits

Check this Question online on JavaChamp.com: [length of the 8088 processor physical address](#)

1.1.58. logical operator OR in assembly

The result of logical operation: 0 OR 0

Please choose only one answer:

- logic 0
- logic 1

Check this Question online on JavaChamp.com: [logical operator OR in assembly](#)

1.1.59. logical operator XOR in assembly

The result of logical operation: 1 XOR 0

Please choose only one answer:

- logic 0
- logic 1

Check this Question online on JavaChamp.com: [logical operator XOR in assembly](#)

1.1.60. double word

How many bytes in a double word

Please choose only one answer:

- 1 byte
- 2 byte
- 4 byte

Check this Question online on JavaChamp.com: [double word](#)

1.1.61. bits in double word

how many bits in one double word?

Please choose only one answer:

- 8 bits
- 16 bits
- 32 bits

Check this Question online on JavaChamp.com: [bits in double word](#)

1.1.62. Counter register

The CX register full name is:

Please choose only one answer:

- Accumulator register
- Base register
- Counter register

Check this Question online on JavaChamp.com: [Counter register](#)

1.1.63. instructions performed in Counter register

Which of the following instruction(s) can be performed only in CX register:

Please choose only one answer:

- LOOP
- MUL, DIV, CBW
- ADD, SUB

Check this Question online on JavaChamp.com: [instructions performed in Counter register](#)

1.1.64. Index registers

Classify the following register(s) SI,DI

Please choose only one answer:

- Index registers
- General purpose registers
- Segment registers

Check this Question online on JavaChamp.com: [Index registers](#)

