

Java Multiple Choice Questions

Q. Which of the following live on the heap in java?

- Class
- Instance variable
- Method
- Object

Object

Q. Which of the following interface is used to declare core methods in java?

- Set
- EventListner
- Collection
- Comparator

Collection

Q. Which of these interface handle sequences?

- Set
- List
- Comparator
- Collection

List

Q. Which of this interface must contain a unique element?

- Set
- List
- Array
- Collection

Set

Q. Which of the following declarations does not compile?

A. double num1, int num2 = 0;

B. int num1, num2;

C. int num1, num2 = 0;

D. int num1 = 0, num2 = 0;

A. double num1, int num2 = 0;

Q. What is the output of following program?

```
public class Test {
```

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

```

        for(int i = 0; i < 5; i++) {
            System.out.println(i + ' ');
        }
    }
}

```

Output

```

32
33
34
35
36

```

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Q. What is the output of following program?

```

import java.util.ArrayList;
public class Test {

    public static void main(String[] args) {
        ArrayList arrList = new ArrayList();
        arrList.add(1);
        arrList.add('1');
        arrList.add("1");

        System.out.println(arrList);
    }
}

```

Output

```

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```

Q. What is the output of following program?

```

public class Test {

    public static void main(String[] args) {
        for(int i=0; 0; i++) {
            System.out.println("Hello World!");
        }
    }
}

```

Output

Exception in thread "main" java.lang.Error: Unresolved compilation problem:

Type mismatch: cannot convert from int to boolean

at Test.main(Test.java:5)

Q. Which statement about a valid .java file is true?

- A. It can only contain one class declaration.
- B. It can contain one public class declaration and one public interface definition.
- C. It must define at least one public class.
- D. It may define at most one public class.

Answer: D

Q. What is the output of following program?

```
public class Test {  
  
    private static int one = 10;  
    int two = 20;  
  
    public static void main(String []args) {  
        Test test = new Test();  
        int today = 20; two = 40;  
        System.out.println(today + test.two + test.one);  
    }  
}
```

Output

Exception in thread "main" java.lang.Error: Unresolved compilation problem:

Cannot make a static reference to the non-static field two

at Test.main(Test.java:9)

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Q. What is the output of following program?

```
public class Test{  
  
    static int start = 2;  
    final int end;  
    public Test(int x) {  
        x = 4;  
        end = x;  
    }  
    public void fly(int distance) {  
        System.out.println(end-start+" ");  
        System.out.println(distance);  
    }  
    public static void main(String []args){  
        new Test(10).fly(5);  
    }  
}
```

Output

[2 5]

Q. What is the output of following program?

```
public class Test
{
    public static void main(String a[]) {
        try {
            int val = 10/0;
        } catch(Exception e) {
            System.out.println(e);
        } catch(ArithmeticException ae) {
            System.out.println(ae);
        }
    }
}
```

Output

Exception in thread "main" java.lang.Error: Unresolved compilation problem:

Unreachable catch block for ArithmeticException. It is already handled by the catch block for Exception

at Test.main(Test.java:12)

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Q. What is the output of following program?

```
public class Test
{
    static void charNum(String inputString) {
        HashMap<Character, Integer> charMap = new HashMap<Character, Integer>();
        char[] strArray = inputString.toCharArray();
        for(char c: strArray) {
            if(charMap.containsKey(c)) {
                charMap.put(c, charMap.get(c)+1);
            } else {
                charMap.put(c, 1);
            }
        }
        Set<Character> charInString = charMap.keySet();
        for(Character ch: charInString) {
            if(charMap.get(ch) > 1) {
                System.out.println(ch + " : " + charMap.get(ch));
            }
        }
    }
    public static void main(String[] args) {
```

```

        charNum("JavaJ2Ee");
    }
}

```

Output

```

a : 2
J : 2

```

Q. Which of the following declarations does not compile?

- A. double num1, int num2 = 0;
- B. int num1, num2;
- C. int num1, num2 = 0;
- D. int num1 = 0, num2 = 0;

A. double num1, int num2 = 0;

Explanation: A. Option A does not compile because Java does not allow declaring different types as part of the same declaration.

Q. What is the output of the following?

```

public static void main(String... args) {
    String chair, table = "metal";
    chair = chair + table;
    System.out.println(chair);
}

```

- A. metal
 - B. metalmetal
 - C. nullmetal
 - D. The code does not compile
- D. The code does not compile

Explanation: The local variable chair may not have been initialized

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Q. Which is correct about an instance variable of type String?

- A. It defaults to an empty string.
 - B. It defaults to null.
 - C. It does not have a default value.
 - D. It will not compile without initializing on the declaration line
- B. It defaults to null.

Q. How many of the following methods compile?

```

public class Test
{

```

```

public String convert(int value) {
    return value.toString();
}
public String convert(Integer value) {
    return value.toString();
}
public String convert(Object value) {
    return value.toString();
}

public static void main(String... args) {
    Test obj = new Test();
    System.out.println(obj.convert(10));
}
}

```

- A. None
 - B. One
 - C. Two
 - D. Three
- C. Two

Explanation: Objects have instance methods while primitives do not. Since int is a primitive, you cannot call instance methods on it. Integer and String are both objects and have instance methods.

Q. Which of the following does not compile?

- A. int num = 999;
 - B. int num = 9_9_9;
 - C. int num = _9_99;
 - D. None of the above; they all compile.
- C. int num = _9_99;

Q. Which is the first line to trigger a compiler error?

```

double d1 = 5f; // p1
double d2 = 5.0; // p2
float f1 = 5f; // p3
float f2 = 5.0; // p4

```

- A. p1
 - B. p2
 - C. p3
 - D. p4
- D. P4

Explanation: Type mismatch: cannot convert from double to float

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Q. How many instance initializers are in this code?

```
public class Bowling {  
    {  
        System.out.println();  
    }  
    public Bowling () {  
        System.out.println();  
    }  
    static {  
        System.out.println();  
    }  
    {  
        System.out.println();  
    }  
}
```

- A. None
- B. One
- C. Two
- D. Three
- C. Two

Q. What is true of the finalize() method?

- A. It may be called zero or one times.
- B. It may be called zero or more times.
- C. It will be called exactly once.
- D. It may be called one or more times.
- A. It may be called zero or one times.

Explanation: The finalize() method may not be called, such as if your program crashes. However, it is guaranteed to be called no more than once.

Q. Which of the following is true about primitives?

- A. You can call methods on a primitive.
- B. You can convert a primitive to a wrapper class object simply by assigning it.
- C. You can convert a wrapper class object to a primitive by calling valueOf().
- D. You can store a primitive directly into an ArrayList.
- B. You can convert a primitive to a wrapper class object simply by assigning it.

Q. What is the output of the following?

```
Integer integer = new Integer(4);  
System.out.print(integer.byteValue());
```

```
System.out.print("-");  
int i = new Integer(4);  
System.out.print(i.byteValue());
```

- A. 4-0
- B. 4-4
- C. The code does not compile.
- D. The code compiles but throws an exception at runtime
- C. The code does not compile.

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Q. Which two primitives have wrapper classes that are not merely the name of the primitive with an uppercase letter?

- A. byte and char
- B. byte and int
- C. char and int
- D. None of the above
- C. char and int

Explanation: The wrapper class for int is Integer and the wrapper class for char is Character. All other primitives have the same name. For example, the wrapper class for boolean is Boolean.

Q. How do you force garbage collection to occur at a certain point?

- A. Call System.forceGc()
- B. Call System.gc()
- C. Call System.requireGc()
- D. None of the above
- D. None of the above

Explanation: While you can suggest to the JVM that it might want to run a garbage collection cycle, the JVM is free to ignore your suggestion.

Q. How many of the String objects are eligible for garbage collection right before the end of the main method?

```
public static void main(String[] fruits) {  
    String fruit1 = new String("apple");  
    String fruit2 = new String("orange");  
    String fruit3 = new String("pear");  
    fruit3 = fruit1;  
    fruit2 = fruit3;  
    fruit1 = fruit2;  
}
```


- A. None
- B. One
- C. Two
- D. Three

C. Two

Explanation: All three references point to the String apple. This makes the other two String objects eligible for garbage collection.

Q. Which of the following does not compile?

- A. double num = 2.718;
- B. double num = 2._718;
- C. double num = 2.7_1_8;
- D. None of the above; they all compile

B. double num = 2._718;

Explanation: Underscores are allowed between any two digits in a numeric literal. Underscores are not allowed adjacent to a decimal point

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Q. Which of the following is the output of this code, assuming it runs to completion?

```
public class Toy {
    public void play() {
        System.out.print("play-");
    }
    public void finalizer() {
        System.out.print("clean-");
    }
    public static void main(String[] fun) {
        Toy car = new Toy();
        car.play();
        System.gc();
        Toy doll = new Toy();
        doll.play();
    }
}
```

- A. play-
 - B. play-play-
 - C. play-clean-play-
 - D. play-play-clean-clean-
- B. play-play-

Explanation: If there was a `finalize()` method, this would be a different story. However, the method here is `finalizer`. Tricky! That's just a normal method that doesn't get called automatically. Therefore `clean` is never output.

Q. What is the value of `tip` after executing the following code snippet?

```
int meal = 5;  
int tip = 2;  
int total = meal + (meal > 6 ? ++tip : --tip);
```

- A. 1
- B. 2
- C. 3
- D. 6
- D. 6

Explanation: In ternary expressions, only one of the two right-most expressions are evaluated. Since `meal > 6` is false, `--tip` is evaluated and `++tip` is skipped. `tip` is changed from 2 to 1 and `total` becomes `meal + (1)` which means `5 + 1 = 6`.

Q. What is the output of the following application?

```
String john = "john";  
String jon = new String(john);  
  
System.out.println((john==jon) + " " + (john.equals(jon)));
```

- A. true true
- B. true false
- C. false true
- D. false false
- C. false true

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