

JAVA Programming Language Homework II

Student ID: Name:

1. Given the following Java code:

```
1.      class A {
2.          public static void main (String[] args) {
3.              Byte tmp1 = new Byte("1");
4.              Byte tmp2 = new Byte("1");
5.              if (tmp1 == tmp2) System.out.println("true,");
6.              else System.out.println("false,");
7.              if (tmp1.equals(tmp2)) System.out.println("true,");
8.              else System.out.println("false,");
9.          }
10.     }
```

What is the result?

- A. false, false
- B. false, true
- C. true, false
- D. true, true
- E. None of the above

Answer:

2. Given the following Java code:

```
1.      class A {
2.          final String s1 = "A.s1";
3.          final String S2 = "Aa.s1";
4.          class B {
5.              String s1;
6.              void m() {System.out.println(???);}
7.              void n() {System.out.println("B");}
8.          }
9.          public static void main(String args[]) {
10.             A g = new A();
11.             g.new B().m();
12.         }
```

13. }

What field access expression could be used in place of ??? above to cause the program to print "A.s1" ?

- A. s1
- B. A.s1
- C. ((A)this).s1
- D. A.this.s1
- E. None of the above

Answer:

3. Given the following Java code:

```
1.       Integer i = new Integer(42);
2.       Long l = new Long(42);
3.       Double d = new Double(42.0);
```

Which two expressions evaluate to True?

- A. (i== 1)
- B. (i == d)
- C. (i.equals(42))
- D. (i.equals(d))
- E. (d.equals(i))

Answer:

4. Given the following Java code:

```
11.       class A {
12.           public static final int a = 1;
13.           protected static int b=2;
14.           int c=3;
15.           static class B {
16.               int d=a;
17.               int e=b;
18.               int f=c;
19.           }
20.       class C {
21.           int g=a;
```

```
22.         int h=b;
23.         int i=c;
24.     }
25. }
```

What is the result?

- F. Compilation Error at line 10.
- G. Compilation Error at line 8.
- H. Compilation Error at line 2.
- I. Run without any problem.
- J. None of the above.

Answer:

5. Given the following Java code:

```
1.     class B {
2.         private int x = 2;
3.         static A a1 = new A(2,1) {
4.             public A(int tmp) {x(tmp); y(tmp);};
5.             public int m() {return x()+y();}
6.         };
7.         public static void main(String[] args) {
8.             System.out.print(a1.m());
9.         }
10.    }
11.    abstract class A {
12.        private int x = 4;
13.        private int y = 2;
14.        private int z = 6;
15.        public int x() {return x;}
16.        public void x(int x) {this.x = x;}
17.        public int y() {return y;}
18.        public void y(int y) {this.y = y;}
19.        public abstract int m();
20.    }
```

What is the result?

- A. Prints: 8

- B. Prints: 3122
- C. Compilation fails
- D. Run-time error
- E. None of the above

Answer:

6. Given the following Java code:

```
1.    public class Foo {
2.        Foo() {System.out.println("foo");}
3.        class Bar {
4.            Bar() {System.out.println("bar");}
5.            public void go() {System.out.println("hi");}
6.        }
7.        public static void main (String[] args) {
8.            Foo f = new Foo();
9.            f.makeBar();
10.        }
11.        void makeBar() {
12.            (new Bar() {}).go();
13.        }
14.    }
```

What is the result?

- A. Run-time error.
- B. Compilation fails.
- C. foobarhi
- D. barhi
- E. hi

Answer:

7. Given the following Java code:

```
1.    public class HorseTest {
2.        public static void main (String[] args) {
3.            class Horse {
4.                public String name;
```

```
5.         public Horse(String s) {
6.             name = s;
7.         }
8.     }
9.     Object obj = new Horse("Zippo");
10.    Horse h = (Horse) obj;
11.    System.out.println(h.name);
12.    }
13. }
```

What is the result?

- A. Compilation Error at line 3
- B. Compilation Error at line 9
- C. Compilation Error at line 10
- D. Compilation Error at line 11
- E. Zippo

Answer :

8. Given the following Java code:

```
1.     public class HorseTest {
2.         public static void main (String[] args) {
3.             class Horse {
4.                 public String name;
5.                 public Horse(String s) {
6.                     name = s;
7.                 }
8.             }
9.             Object obj = new Horse("Zippo");
10.            System.out.println(obj.name);
11.        }
12.    }
```

What is the result?

- A. Compilation Error at line 3
- B. Compilation Error at line 9
- C. Compilation Error at line 10

D. Compilation Error at line 11

E. Zippo

Answer:

9. Given the following Java code:

```
1.    public abstract class AbstractTest {
2.        public int getNum() {
3.            return 45;
4.        }
5.    public abstract class Bar {
6.        public int getNum() {
7.            return 38;
8.        }
9.    }
10.   public static void main (String[] args) {
11.       AbstractTest t = new AbstractTest() {
12.           public int getNum() {
13.               rerurn 22;
14.           }
15.       };
16.       AbstractTest.Bar f = t.new Bar() {
17.           public int getNum() {
18.               return 57;
19.           }
20.       };
21.       System.out.println(f.getNum() + " " + t.getNum());
22.   }
23. }
```

What is the result?

A. 57 22

B. 45 38

C. 45 57

D. Compilation fails

E. None of the above

Answer:

10. Given the following Java code:

```
1.    public class TestObj {
2.        public static void main (String [] args) {
3.            Object o = new Object() {
4.                public boolean equals(Object obj) {
5.                    return true;
6.                }
7.            }
8.            System.out.println(o.equals("Fred"));
9.        }
10.    }
```

What is the result?

- A. true
- B. Compilation fails because of an error on line 3.
- C. Compilation fails because of an error on line 4.
- D. Compilation fails because of an error on line 8.
- E. Compilation fails because of an error on a line other than 3, 4, or 8.

Answer:

11. Given the following Java code:

```
1.    class Foo {
2.        class Bar{ }
3.    }
4.    class Test {
5.        public static void main (String [] args) {
6.            Foo f = new Foo();
7.            // Insert code here
8.        }
9.    }
```

Which statement, inserted at line 7, creates an instance of Bar?

- A. Foo.Bar b= new Foo.Bar();
- B. Foo.Bar b = f.new Bar();
- C. Bar b = new f.Bar();
- D. Bar b = f.new Bar();

E. Foo.Bar b = new f.Bar();

Answer: