CS6312: Program Construction II [S18]

QUIZ NAVIGATION

1 2 3 4 5 6 7 8 9 10

Show one page at a time

Finish review

Started on	Saturday, February 3, 2018, 7:32 PM
State	Finished
Completed on	Saturday, February 3, 2018, 7:42 PM
Time taken	10 mins 1 sec
Grade	**7.00** out of 10.00 (**70**%)

Question 1

Correct

1.00 points out of 1.00

Flag question

The getValue() method is overridden in two ways. Which one is correct?

```
I:
public class Test {
  public static void main(String[] args) {
    A a = new A();
    System.out.println(a.getValue());
  }
}

class B {
  public String getValue() {
    return "Any object";
  }
}

class A extends B {
  public Object getValue() {
    return "A string";
  }
}

II:
public class Test {
  public static void main(String[] args) {
    A a = new A();
    System.out.println(a.getValue());
  }
}

class B {
  public Object getValue() {
    return "Any object";
  }
}

class A extends B {
  public String getValue() {
    return "A string";
  }
}
```

Select one:

- a. Neither
- b. II ✓
- c. Both I and II
- d. I

Question 2

Correct

1.00 points out of 1.00

Flag question

Polymorphism means _____

Select one:

- a. that data fields should be declared private
- b. that a variable of supertype can refer to a subtype object ✓
- c. that a class can extend another class
- d. that a class can contain another class

Question 3

Correct

1.00 points out of 1.00

Flag question

Which of the following statements are true?

Select one or more:

- a. Dynamic binding can apply to instance methods. ✓
- b. The compiler finds a matching method according to parameter type, number of parameters, and order of the parameters at compilation time. ✓
- c. You can always pass an instance of a subclass to a parameter of its superclass type. This feature is known as polymorphism. ✓
- d. A method may be implemented in several subclasses. The Java Virtual Machine dynamically binds the implementation of the method at runtime. ✓
- e. Dynamic binding can apply to static methods.

Question 4

Incorrect

0.00 points out of 1.00

Flag question

Analyze the following code:

```
// Program 1
public class Test {
  public static void main(String[] args) {
    Object a1 = new A();
    Object a2 = new A();
    System.out.println((A)a1).equals((A)a2));
  }
}

class A {
  int x;

  public boolean equals(A a) {
    return this.x == a.x;
  }
}

// Program 2
public class Test {
  public static void main(String[] args) {
    A a1 = new A();
    A a2 = new A();
    System.out.println(a1.equals(a2));
  }
}

class A {
  int x;

  public boolean equals(A a) {
    return this.x == a.x;
  }
}
```

Select one:

- a. Program 1 displays true and Program 2 displays false ✗
- b. Program 1 displays true and Program 2 displays true
- c. Program 1 displays false and Program 2 displays false
- d. Program 1 displays false and Program 2 displays true

Question 5

Incorrect

0.00 points out of 1.00

Flag question

Analyze the following code:

```
// Program 1:
public class Test {
  public static void main(String[] args) {
    Object circle1 = new Circle();
    Circle circle 2 = new Circle();
    System.out.println(circle1.equals(circle2));
  }
}

class Circle {
  double radius;

  public boolean equals(Circle circle) {
    return this.radius == circle.radius;
  }
}

// Program 2:
public class Test {
  public static void main(String[] args) {
    Circle circle 1 = new Circle();
    Circle circle 2 = new Circle();
    System.out.println(circle1.equals(circle2));
  }
}

class Circle {
  double radius;

  public boolean equals(Object circle) {
    return this.radius ==
      ((Circle)circle).radius;
  }
}
```

Select one:

- a. Program 1 displays false and Program 2 displays true
- b. Program 1 displays false and Program 2 displays false
- c. Program 1 displays true and Program 2 displays false ✗
- d. Program 1 displays true and Program 2 displays true

Question 6

Correct

1.00 points out of 1.00

Flag question

You can always successfully cast a superclass to a subclass.

Select one:

- a. false ✓
- b. true

Question 7

Incorrect

0.00 points out of 1.00

Flag question

Analyze the following code:

```
// Program 1:
public class Test {
  public static void main(String[] args) {
    Object circle1 = new Circle();
    Object circle2 = new Circle();
    System.out.println(circle1.equals(circle2));
  }
}

class Circle {
  double radius;

  public boolean equals(Circle circle) {
    return this.radius == circle.radius;
  }
}

// Program 2:
public class Test {
  public static void main(String[] args) {
    Object circle1 = new Circle();
    Object circle2 = new Circle();
    System.out.println(circle1.equals(circle2));
  }
}

class Circle {
  double radius;

  public boolean equals(Object circle) {
    return this.radius ==
      ((Circle)circle).radius;
  }
}
```

Select one:

- a. Program 1 displays true and Program 2 displays true
- b. Program 1 displays true and Program 2 displays false
- c. Program 1 displays false and Program 2 displays false ✗
- d. Program 1 displays false and Program 2 displays true

Question 8

Correct

1.00 points out of 1.00

Flag question

Which of the following methods override the toString method in the Object class?

Select one:

- a. public void toString(String s)
- b. public static String toString()
- c. public String toString(String s)
- d. public String toString() ✓

Question 9

Correct

1.00 points out of 1.00

Flag question

Given the following classes and their objects:

```
class C1 {};
class C2 extends C1 {};
class C3 extends C1 {};

C2 c2 = new C2();
C3 c3 = new C3();
```

Analyze the following statement:

```
c2 = (C2)((C1)c3);
```

Select one:

- a. You will get a runtime error because you cannot cast objects from sibling classes. ✓
- b. You will get a runtime error because the Java runtime system cannot perform multiple casting in nested form.
- c. The statement is correct.
- d. c3 is cast into c2 successfully.

Question 10

Correct

1.00 points out of 1.00

Flag question

Analyze the following code:

```
Cylinder cy = new Cylinder(1, 1);
Circle c = cy;
```

Select one:

- a. The code has a compile error.
- b. The code has a runtime error.
- c. The code is fine. ✓

Finish review