

# CS6312: Program Construction II [S18]

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Started on	Saturday, February 3, 2018, 8:06 PM
State	Finished
Completed on	Saturday, February 3, 2018, 8:15 PM
Time taken	8 mins 57 secs
Grade	10.00 out of 10.00 (100%)

Question 1

Correct

1.00 points out of 1.00

Flag question

The instanceof operator is used to determine whether an object is an instance of a certain class.

Select one:

☐ a. false

☒ b. true ✓

Question 2

Correct

1.00 points out of 1.00

Flag question

Which of the following are Java keywords?

Select one:

☐ a. casting

☒ b. instanceof ✓

☐ c. instanceof

☐ d. cast

Question 3

Correct

1.00 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 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) {  
 Circle circle1 = new Circle();  
 Circle 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 false and Program 2 displays false

☐ b. Program 1 displays true and Program 2 displays false

☐ c. Program 1 displays true and Program 2 displays true

☒ d. Program 1 displays false and Program 2 displays true ✓

Question 4

Correct

1.00 points out of 1.00

Flag question

Analyze the following code:

public class Test {  
 public static void main(String[] args) {  
 Object a1 = new A();  
 Object a2 = new Object();  
 System.out.println(a1);  
 System.out.println(a2);  
 }  
}  
  
class A {  
 int x;  
  
 public String toString() {  
 return "A's x is " + x;  
 }  
}

Select one or more:

☒ a. When executing System.out.println(a2), the toString() method in the Object class is invoked. ✓

☐ b. The program cannot be compiled, because System.out.println(a1) is wrong and it should be replaced by System.out.println(a1.toString());

☒ c. When executing System.out.println(a1), the toString() method in the A class is invoked. ✓

☐ d. When executing System.out.println(a1), the toString() method in the Object class is invoked.

Question 5

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 is fine. ✓

☐ c. The code has a runtime error.

Question 6

Correct

1.00 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(a1.equals(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 false and Program 2 displays true ✓

☐ b. Program 1 displays true and Program 2 displays true

☐ c. Program 1 displays true and Program 2 displays false

☐ d. Program 1 displays false and Program 2 displays false

Question 7

Correct

1.00 points out of 1.00

Flag question

Analyze the following code:

Circle c = new Circle (5);  
Cylinder c = cy;

Select one:

☐ a. The code has a runtime error.

☐ b. The code is fine.

☒ c. The code has a compile error. ✓

Question 8

Correct

1.00 points out of 1.00

Flag question

What is the output of the following code?

public class Test {  
 public static void main(String[] args) {  
 String s1 = new String("Java");  
 String s2 = new String("Java");  
 System.out.print((s1 == s2) + " " + (s1.equals(s2)));  
 }  
}

Select one:

☐ a. false false

☐ b. true false

☐ c. true true

☒ d. false true ✓

Question 9

Correct

1.00 points out of 1.00

Flag question

Every class has a toString() method and an equals() method.

Select one:

☒ a. true ✓

☐ b. false

Question 10

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.

Finish review