## CSSE 220 – Object-Oriented Software Development
### Rose-Hulman Institute of Technology

## Worksheet 10

Name (Print):_____       Section:_____

1. What is the alternative statement to if-else: _____

2. The keyword _____ will stop the execution and break out of the switch block

3. The keyword _____ specifies what to do if there is no case match

4. Complete the code using the alternative to if-else statements:

```
1
2   _____(month)   {
3
4   _____     1:
5  # code block
6
7   _____     ;
8
9   _____     2:
10  # code block
11
12  _____     ;
13
14 default:
15   # code block
16 }
```

5. You are going to use **this** to call another constructor

```
1 // Constructor that accepts all parameters
2     public Book(String title, String author, int year) {
3         this.title = title;
4         this.author = author;
5         this.year = year;
6     }
7   // write a constructor without parameters that must invoke   the
     above constructor and add some default values
8
9
10
11
12
```

6. What is the output?

```
1 class Example {
2     int x;
3
4     public Example() {
5         this(10);
6         System.out.println("Default Constructor");
7     }
8
9     public Example(int x) {
10         this.x = x;
11         System.out.println("Parameterized Constructor: " + x);
12     }
13
14     public static void main(String[] args) {
15         Example e = new Example();
16     }
17 }
18
```

Your answer:

7. What is the output?

```
1  public class Rectangle {
2      private int width;
3      private int height;
4
5      public Rectangle(int width, int height) {
6          this.width = width;
7          this.height = height;
8      }
9
10     public Rectangle(int side) {
11         this(side, side);
12     }
13
14     public int area() {
15         return width * height;
16     }
17
18     public static void main(String[] args) {
19         Rectangle r = new Rectangle(4);
20         System.out.println("Area: " + r.area());
21     }
22 }
```

8. Select all that apply:

A. this can only be used in constructors

B. this is used to refer to the current object's instance variables and methods

C. this() (constructor invocation) must be the first statement in a constructor

D. this is especially necessary when there is a naming conflict between instance variables and parameters

9. Find errors

```
1      interface Drawable {
2       public void draw() {
3           System.out.println("Drawing");
4       } ;
5 }
6
7 public class Circle extends Drawable {
8
9       public void draw(int radius) {
10           System.out.println("Drawing circle with radius " + radius);
11       }
12
13       public static void main(String[] args) {
14           Circle c = new Circle();
15           c.draw();
16       }
17 }
```

Write the line and what type of error you found

- 

- 

- 

10. True/False All methods declared in an interface are implicitly private (unless explicitly declared as static and default)

11. Select all that apply

A. A private field in a class can be accessed directly by any other class within the same package

B. A private field in a class is accessible only within the class itself, but it can be indirectly accessed through public getter and setter methods if provided

C. A final method can be overridden by a subclass

D. A final variable can be assigned a value only once, and its value cannot be changed after assignment

12. True/False Interface can extend many interfaces