SENG2200/6220 –Programming Languages & Paradigms
Self-Quiz for Week 5, Semester 1, 2020

True/False Questions.

1. The code below is correct?

```
LinkedList<Integer> myList = new LinkedList<Integer>();
myList.add(new Integer(10));
myList.add(new Double(1.0));
```

2. The code below is correct?

```
LinkedList<Integer> myList = new LinkedList<Integer>();
LinkedList<Object> oList = myList;
```

3. Generics can convert run-time errors to compile-time errors.

4. Wildcard (?) can provide type safety control, or “write protection”.

5. The result of the following **if** statement is true?

```
LinkedList<Integer> intList = new LinkedList<>();
LinkedList<Double> doubleList = new LinkedList<>();
if(intList.getClass() != doubleList.getClass()) …
```

6. In bounded wildcards, supertype bounds allow read to a generic type T.

7. Assume we have a generic/template class Box in Java and C++, respectively. The declaration below is allowed in both C++ and Java.

```
Box<int> yourList;
```

Short-Answer Questions

8. How would the Type Erasure mechanism translate the code below?

```
public class Sack<T> {
      void insert(T x) {…}
      T getRandom() {…}
}
```

9. What is the difference(s) between Java Generics and C++ Template during the compilation?