CS1020 Data Structures and Algorithms I

ANSWER SHEETS

INSTRUCTIONS TO CANDIDATES

1. This document consists of **SIX (6)** printed pages.

2. Fill in your Matriculation Number <u>clearly</u> below and at the top of pages 3 and 5.

3. Fill in your Tutorial Group below.

4. You may use pencil to write your code.

5. The last page (page 6) may be used if you need more space to write your answers.

MATRICULATION NO.: | A | | | | | | | | |

(Write your Matriculation Number legibly with a <u>pen</u>.)

TUTORIAL GROUP:

For examiners' use only		
Question	*Max*	*Marks*
Q1-5	5	
Q6	2	
Q7	3	
Q8	3	
Q9	3	
Q10	5	
Q11	9	
Total	**30**	

MCQs [5 marks]

Q1. **Q2.** **Q3.** **Q4.** **Q5.**

Q6. [2 marks]

Q7. [3 marks]

Q8. [3 marks]

Q9. [3 marks]

```
private static Boolean areAnagrams(String word1,
                                   String word2) {
   if (word1.length() != word2.length())
      return false;
   for (int i = 0; i < word1.length(); i++) {




   }
   return (word2.length() == 0);
}
```

Q10. Triangle.java   **[Total: 5 marks]**

(a)   [1 mark]

```java
// Default triangle with vertices (0,0), (0,1) and (1,0)
public Triangle() {



}
```

(b)   [1 mark]

```java
public Triangle(int vertex1X, int vertex1Y,
                int vertex2X, int vertex2Y,
                int vertex3X, int vertex3Y) {



}
```

(c)   [3 marks]

```java
// Return the area of this triangle
private double computeArea() {



}
```

Q11. TestTriangle.java   **[Total: 9 marks]**
  (a)   [5 marks]

```java
private void createList() {

    Scanner sc = new Scanner(System.in);
    System.out.print("Enter number of triangles: ");
    int num = sc.nextInt();



















































}
```

Q11. TestTriangle.java
  (b)   [4 marks]

```
private void removeSmallestTriangle() {




















}
```

This page is intentionally left blank.
Do **NOT** use it for your rough work.
Use it ONLY if you need extra space for your answer, in which case please indicate the
question number clearly.

— **END** —