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| **CSE1206 : Object Oriented Programming Lab Fall 2018** | **Set- A** |

**Online: 3 Date: 12 February, 2019 Group: B1 Time: 25 minutes**

**ID:**

**Marks**

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| 1. Create a Java Project Named ‘**TestTriangle**’. Inside this project (folder) create a new class named ‘**Triangle**’. Inside the **Triangle** class create 3 private variables:   triangleID (int), color(String), side (float). Create necessary constructors if needed. | 3 |
| 1. Inside the **Triangle** Class create two overloaded methods:   public float getArea(Triangle ara[], int findByID) || Search by **TriangleID**  public float getArea(Triangle ara[], String findByColor) || Search By **color**  These methods search for the **Triangle** object from the **Triangle** array of the 1st parameter using the search type given in the 2nd parameter of the method . If object found then calculates the area of the **Triangle** and returns it, otherwise return 0.0  **Here you have to calculate the area of an Equilateral Triangle only**  Area of an Equilareral Triangle = ( Math.sqrt(3) / 4 ) \* side \* side | 2+2 |
| 1. Inside the TestTriangle class create an array of Class Triangle of size 3.   Assign values as follows:  301, Black, 1.5  302, Orange, 3  303, Violet, 6  Call the two methods of **Triangle** class by creating a new object.  For the 1st Method, search using value 303  and for the 2nd one, search using “Red”  **\*you’ll get extra marks if you take the search values as user input.** | 3 |

**Total: 10**

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| Sample Output |
| Area of Triangle Searched by ID 303 is 15.588457268119896  Area of Triangle Searched by color is 0.0 |