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| No. of Pages | 2 |
| No. of Questions | 2 |
| Total Marks | 24 |
| **Time**: 1 Hours | |

**Department of Computer Science and Engineering**

A

**MIDTERM EXAMINATION Spring 2016**

**CSE 111: Programming Language II**

* Answer all questions. Use the answer script for rough work.
* Write final answers of tracing problems **on the question paper**.
* Figure in bracket [] next to each question indicates marks for that question.
* At the end of exam, put **question paper** inside answer script and **return both**.
* Understanding the question is part of the exam, **please do not ask questions**. No washroom breaks.



**Section: \_\_\_ ID: \_\_\_\_\_\_\_\_\_\_\_\_\_ Name in CAPITAL: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Name of Lab Teachers \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Lab Room Number \_\_\_\_\_\_\_\_\_\_\_\_\_ Lab Day \_\_\_\_\_\_\_\_\_\_\_**

#### Question 1 [10 Points]

**public class Student{**

**private String name = "Default";**

**//your code here**

**}**

**public class Midterm{**

**public static void main(String [] args){**

**System.out.println("Output 1: Total Number of Students = " + Student.number);**

**Student s1 = new Student();**

**System.out.println("Output 2: "+s1.getName());**

**s1.setName("Donald");**

**System.out.println("Output 3: "+s1.getName());**

**Student s2 = new Student("Jeb");**

**System.out.println("Output 4: "+s2.getName());**

**Student s3 = new Student("Ted");**

**System.out.println("Output 5: "+s3.getName());**

**Student s4 = new Student();**

**System.out.println("Output 6: "+s4.getName());**

**s4.setName("Ben");**

**System.out.println("Output 7: "+s4.getName());**

**System.out.println("Output 8: Total Number of Students = " + Student.number);**

**}**

**}**

Complete the **Student** class so the **main** method above produces the following output:

**Output 1: Total Number of Students = 0**

**Output 2: Default**

**Output 3: Donald**

**Output 4: Jeb**

**Output 5: Ted**

**Output 6: Default**

**Output 7: Ben**

**Output 8: Total Number of Students = 4**

**[Answer on the answer-script]**

#### Question 2 [12 Points]

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| **class A{** |
| **public static int temp = 1;** |
| **public static int y = 1;** |
| **public int sum = 1;** |
| **public int x = 2;** |
| **public A(){** |
| **y = temp - 1;** |
| **sum = temp + 1;** |
| **temp-= 1;** |
| **}** |
| **public A(int x){** |
| **A.temp = A.y + x;** |
| **}** |
| **public void methodA(int m, int n){** |
| **int x = 1;** |
| **int sum = 0;** |
| **y = y + m + (++temp);** |
| **x = x + 1 + n;** |
| **sum = sum + x + y;** |
| **System.out.println(x + " " + y+ " " + sum);** |
| **}** |
| **public void methodB(int m, int n){** |
| **int y = 1, temp = 1;** |
| **y = y + this.y + m + A.temp;** |
| **x = y + 1 + temp - n;** |
| **methodA(x, y);** |
| **sum = x + y + sum;** |
| **System.out.println(x + " " + y+ " " + sum);** |
| **}** |
| **}** |

What is the output of the following code sequence? **[Answer on question paper]**

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| **A a1 = new A();**  **A a2 = new A(5);**  **a1.methodA(1, 2);**  **a2.methodA(1, 2);**  **a2.methodB(4, 1);** | **x** | **y** | **sum** |
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