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| --- | --- |
| No. of Pages | 2 |
| No. of Questions | 3 |
| Total Marks | 22 |
| **Time**: 50 minutes | |

**Department of Computer Science and Engineering**

A

**MIDTERM EXAMINATION Fall 2018**

**CSE 111: Programming Language II**

* Write theory teacher’s initial (AAR/AHR/DIP/FSH/MSA/MSN/RYB/SEJ/SLI/WAR)

on top of the answer script.

* Answer all questions. Use **back part** of the answer script for rough work.
* Answer Question 1 at the **beginning part** of answer script.
* 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: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Lab Teacher Name/Initials \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Lab Room Number \_\_\_\_\_\_\_\_\_\_\_\_\_ Lab Day & Time \_\_\_\_\_\_\_\_\_\_\_**

#### Question 1 [10 Points] [Answer on the answer-script]

**public class Car {**

**private String make = "";**

**private String model = "";**

**//your code here**

**}**

**public class Test {**

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

**Car c1 = new Car();**

**Car c2 = new Car("Alfa Romeo");**

**Car c3 = new Car("Mercedes-Benz","SLR McLaren 999");**

**c1.start();**

**System.out.println("---------------------------");**

**c2.start();**

**System.out.println("---------------------------");**

**c3.start();**

**}**

**}**

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

**Car is starting**

**---------------------------**

**Car make: Alfa Romeo is starting**

**---------------------------**

**Car make: Mercedes-Benz, model: SLR McLaren 999 is starting**

**Hint**:

public boolean **equals**(Object anObject)

Compares this string to the specified object. The result is true if and only if the argument is not null and is a String object that represents the same sequence of characters as this object.

**Parameters**: anObject - The object to compare this String against

**Returns**: true if the given object represents a String equivalent to this string, false otherwise

**Example**:

String a="apple", b="orange";

System.out.println( a.equals(b) ); //prints false

**Question 2 [6 Points]** **[Answer on question paper]**

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| **Output** |
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**Show the output of the following sequence of statements:**

**Person p;**

**p = new Person();**

**p.x = 11;**

**p.methodTwo();**

**p.y = 22;**

**p.methodOne();**

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| **public class Person {** |
| **public int x;** |
| **public int y;** |
| **public void methodOne(){** |
| **this.x += 4;** |
| **++y;** |
| **System.out.println(x);** |
| **methodTwo();** |
| **System.out.println(y);** |
| **}** |
| **public void methodTwo(){** |
| **x += y;** |
| **this.y = x - 6;** |
| **System.out.println(x);** |
| **System.out.println(y);** |
| **}** |
| **}** |

#### Question 3 [6 Points] [Answer on question paper]

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

**int[] a = {11,22,33};**

**Test t;**

**t = new Test();**

**t.m1(a);**

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| --- |
| **class Test2 {** |
| **int content=2;** |
| **Test2(int param) {** |
| **content\*=param;** |
| **System.out.println(content);** |
| **}** |
| **}** |
| **class Test {** |
| **int x = 3;** |
| **void m1(int[] a) {** |
| **a[0] = x;** |
| **a[2] = m2(a[2]);** |
| **System.out.println(a[0]);** |
| **System.out.println(a[2]);** |
| **a = m2(a);** |
| **System.out.println(a[0]);** |
| **System.out.println(a[1]);** |
| **Test2[] t2 = new Test2[2];** |
| **t2[1] = new Test2(2);** |
| **}** |
| **int m2(int a) {** |
| **++a;** |
| **System.out.println(a);** |
| **return a+10;** |
| **}** |
| **int[] m2(int[] b){** |
| **b[1] = 10;** |
| **int[] c = {100,200,300,400};** |
| **return c;** |
| **}** |
| **}** |