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| No. of Pages | 2 |
| No. of Questions | 2 |
| Total Marks | 20 |
| **Time**: 50 minutes | |

**Department of Computer Science and Engineering**

B

**MIDTERM EXAMINATION Spring 2018**

**CSE 110: Programming Language I**

**CSE 161: Computer Programming**

* Write intial (AAR/ABD/AHR/DIP/MHT/MSI/MSN/NSM/RAK/WRA) of theory teacher

and section on top of the answer script

* Answer all questions. Use **back part** of the the answer script for rough work.
* Answer Question 1 at the **beginning part** of answer script.
* Write answer of Question 2 **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: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Names/initials of Lab Teachers \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Lab Room Number \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Lab Day and Time\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Question 1 [10 Points]**

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

Draw the **flowchart** of a program that asks the user for the ***quantity*** of students and marks as input

and then prints the number of students in each category (Top/Work hard/Error).

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| **Examples** | **Sample Input** | **Sample Output** | **Explanation** |
| **Example 1** | 2, 8, 5 | Top: 1 student(s)  Work hard: 1 student(s)  Error: 0 students(s) | First 2 means there are **two** input marks. 8 and 5 are the input marks. |
| **Example 2** | 4, 6, 195, 3, -5 | Top: 0 student(s)  Work hard: 2 student(s)  Error: 2 students(s) | First 4 means there are **four** input marks. 6, 195, 3, and, -5 are the input marks. |
| **Example 3** | 3, 7, 10, 9 | Top: 3 student(s)  Work hard: 0 student(s)  Error: 0 students(s) | First 3 means there are **three** input marks. 7, 10, and, 9 are the input marks. |

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| **Grading Category** | **Marks** |
| Top | 7 to 10 |
| Work hard | below 7 |
| Error | Above 10 or  negative mark |

**Question 2 [10Points]**[answer on question paper]

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| **public class Q2B {** |
| **public static void main(String[] args) {** |
| **int n=2003;** |
| **int reverse=0;** |
| **while (n>0)** |
| **{** |
| **reverse=reverse\*10+n%10;** |
| **n/=10;** |
| **if (reverse > n)** |
| **{** |
| **System.out.println(n\*reverse);** |
| **}** |
| **if (reverse < n)** |
| **{** |
| **System.out.println(n+reverse);** |
| **}** |
| **else if (n > 10)** |
| **{** |
| **System.out.println(n-reverse);** |
| **}** |
| **}** |
| **System.out.println(reverse);** |
| **System.out.println(n != reverse);** |
| **System.out.println("n="+n+reverse);** |
| **System.out.println(reverse/10000);** |
| **double floatingPointValue = reverse/1000;** |
| **System.out.println(floatingPointValue);** |
| **}** |
| **}** |

**Show output of the above program:**

[Answer on the question paper. **There are NO errors / mistakes in this question. The question is correct.**]

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