REGENT UNIVERSITY

COLLEGE OF SCIENCE AND TECHNOLOGY

SCHOOL INFORMATICS AND ENGINEERING

EXAMINATION PAPER

END OF FIRST SEMESTER EXAMINATIONS
EXAMINIATIONS

SIIS 1513: JAVA PROGRAMMING

Date: 08TH MAY 2009

Time Allowed: THREE HOURS

EXAMINATION MATERIAL PROVIDED: NONE

INSTRUCTION: CANDIDATES MUST ANSWER ALL IN SECTION A AND 3 IN SECTION B

LECTURER: FRANKLIN KOME AMOO

SECTION A

1. Identify the error in the following code segments and explain how to correct the program. Rewrite the corrected code. (5 marks each)

a.
```
while( number < 10 );
{
    evenNumber = number + 2;
    number++;
```

b.
```
if( score > 80 );
    System.out.println("The score is excellent.\n" );
Else;
    System.out.println("The score is good.\n");
```

c.
```
int product( int a, int b);
{
  int result;
  result = a * b;
}
```

d.
```
switch( number )
{
 case 1:
    System.out.println("The number is equal to 1\n ");
 case 2:
    System.out.println("The number is equal to 2\n ");
    break;
 default:
    System.out.println("The number is not 1 and is not 2\n ");
    break;
}
```

2. Write a single Java statement to accomplish the following tasks

a. Display the message "This is a java program." with each word separated by tabs
b. Declare the variables ***speed*** and ***distance*** to be of type int
c. Display the message "The answer is "followed by the value of the integer variable ***result***
d. Test if the value of the variable ***counter*** is greater than 10. If it is, display "Counter is greater than 10"
e. Output integer variable ***distance*** using **System.out.println()**
f. Multiply the variable ***weight*** by the variable ***height*** and assign the result to ***weight***
g. Add variable ***initialSpeed*** to ***totalSpeed***, and assign the result to *totalSpeed*
h. Define an integer array ***evenNumbers*** with size 15
i. Assign the value 16 to the ***eighth element*** of the array evenNumbers
j. Assign the sum xNumber and yNumber to zNumber and increment xNumber after the calculation

SECTION B

3. Write a Java program called Rainfall to accomplish the following tasks. Declare an integer array monthlyRainfall of size 12 and initialise it with the following figures: 85, 69, 60, 71, 80, 72, 98, 75, 89, 82, 56, 73. Using a for loop, display each array element against its position in a tabular form

4. Write a Java program called **Product** to accomplish the following tasks. Define three integer variables pNumber, qNumber and numbersProduct. Assign the product of pNumber, qNumber to numbersProduct. Use a System.out.println() statement to display the two numbers pNumber, and qNumber and their product on the same line. End the program with the message, "This is the end of the Product"

5. Write a Java program PayRoll to accomplish the following tasks. Declare a class called PayRoll. Declare the following variables as double; grossSalary = 3500, netSalary, incomeTax, ssfContribution, totalDeductions. Perform the following calculations using java statements.

ssfContribution = 0.03 x grossSalary;
incomeTax = 0.05 x grossSalary;
totaldeduction = incomeTax + ssfContribution;
netSalary = grossSalary – totalDeduction

Display the value of the ssfContribution in a single statement. Display the value of incomeTax in a single statement. Display the totalDeductions in a single statement. Display the netSalary in a single statement. End the program with the message, "This employee is very rich"

6. Write a Java program to accomplish the following tasks. Define an integer array employeesAges with size 5; Initialise the first element with the value 25, the third element with 27, and the fifth element with 30. Display the values of the first, third and fifth elements on different lines using separate **System.out.println()** method. Leave a blank line between each statement displayed.

7. Write a Java program TwoNumbers to accomplish the following. Define four integer variables *firstNumber*, *secondNumber, numbersProduct and numbersTotal.* Assign the values 35 and 45 to *firstNumber* and *secondNumber* respectively and assign their sum to *numbersTotal*. Also, assign their product to numbersProduct. Display the two numbers and their sum on the same line, and their product another line. End the program with the statement "This is the end of the program"