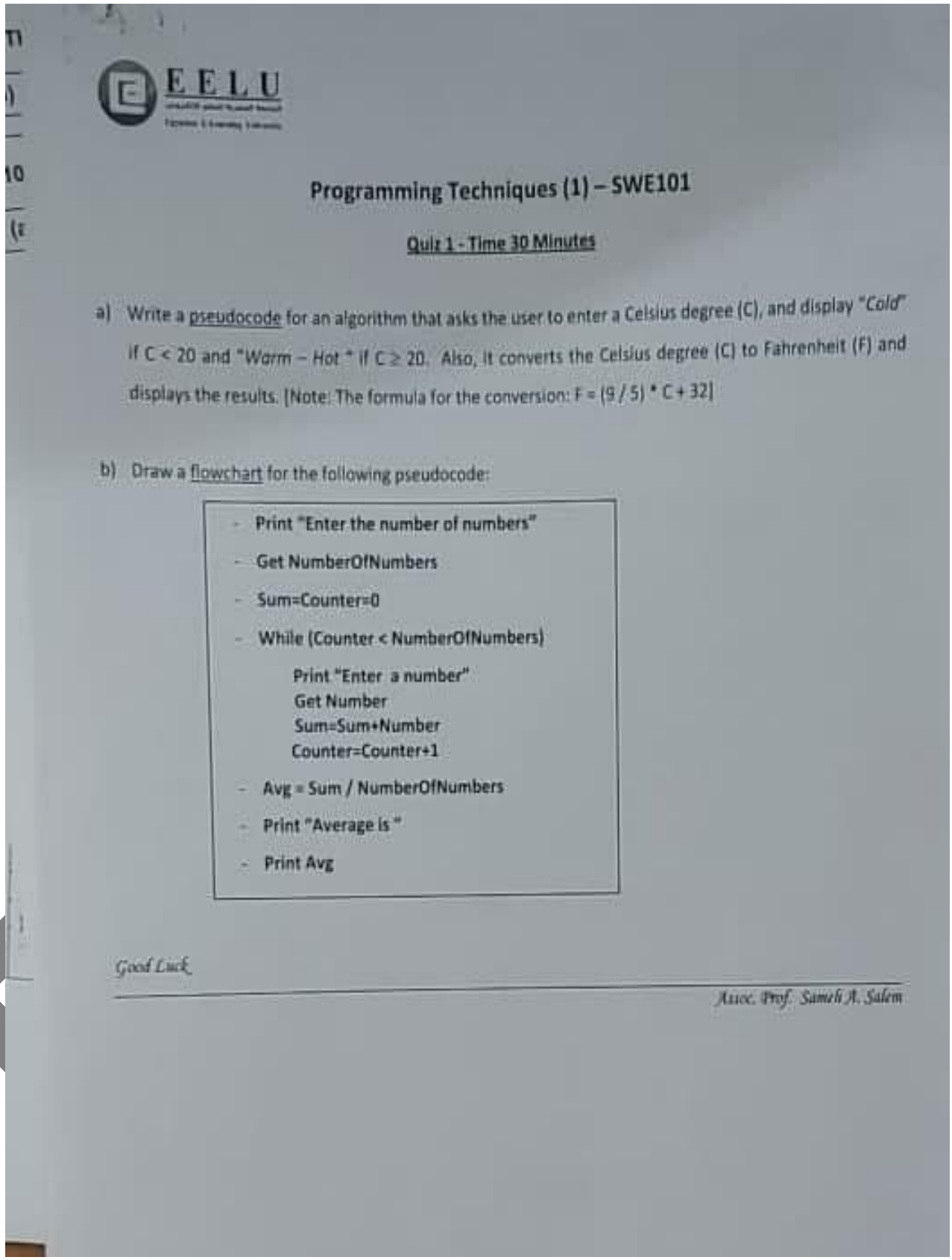


EELU

Programming Techniques (1) – SWE101

Quiz 1 - Time 30 Minutes

a) Write a pseudocode for an algorithm that asks the user to enter a Celsius degree (C), and display *"Cold"* if C < 20 and "Warm – Hot " if C ≥ 20. Also, it converts the Celsius degree (C) to Fahrenheit (F) and displays the results. [Note: The formula for the conversion: F = (9 / 5) * C + 32]

b) Draw a flowchart for the following pseudocode:

```
- Print "Enter the number of numbers"
- Get NumberOfNumbers
- Sum=Counter=0
- While (Counter < NumberOfNumbers)
        Print "Enter  a number"
        Get Number
        Sum=Sum+Number
        Counter=Counter+1
- Avg = Sum / NumberOfNumbers
- Print "Average is "
- Print Avg
```

Good Luck

Assoc. Prof. Sameh A. Salem

b) (4 Marks)

Find the output of the following Java codes.

(a)

```
public class program1 {
public static void main(String[] args) {
   int age=20;
   if(age>18){
      System.out.println("Age is greater than 18");
   }
}
}
```

(b)

```
publicclassProgram2 {
public static voidmain(String[] args) {
int num1 = 5, num2 = 15, sum;
sum = num1 + num2;
     System.out.println("Sum of these numbers: "+sum);
   }
}
```

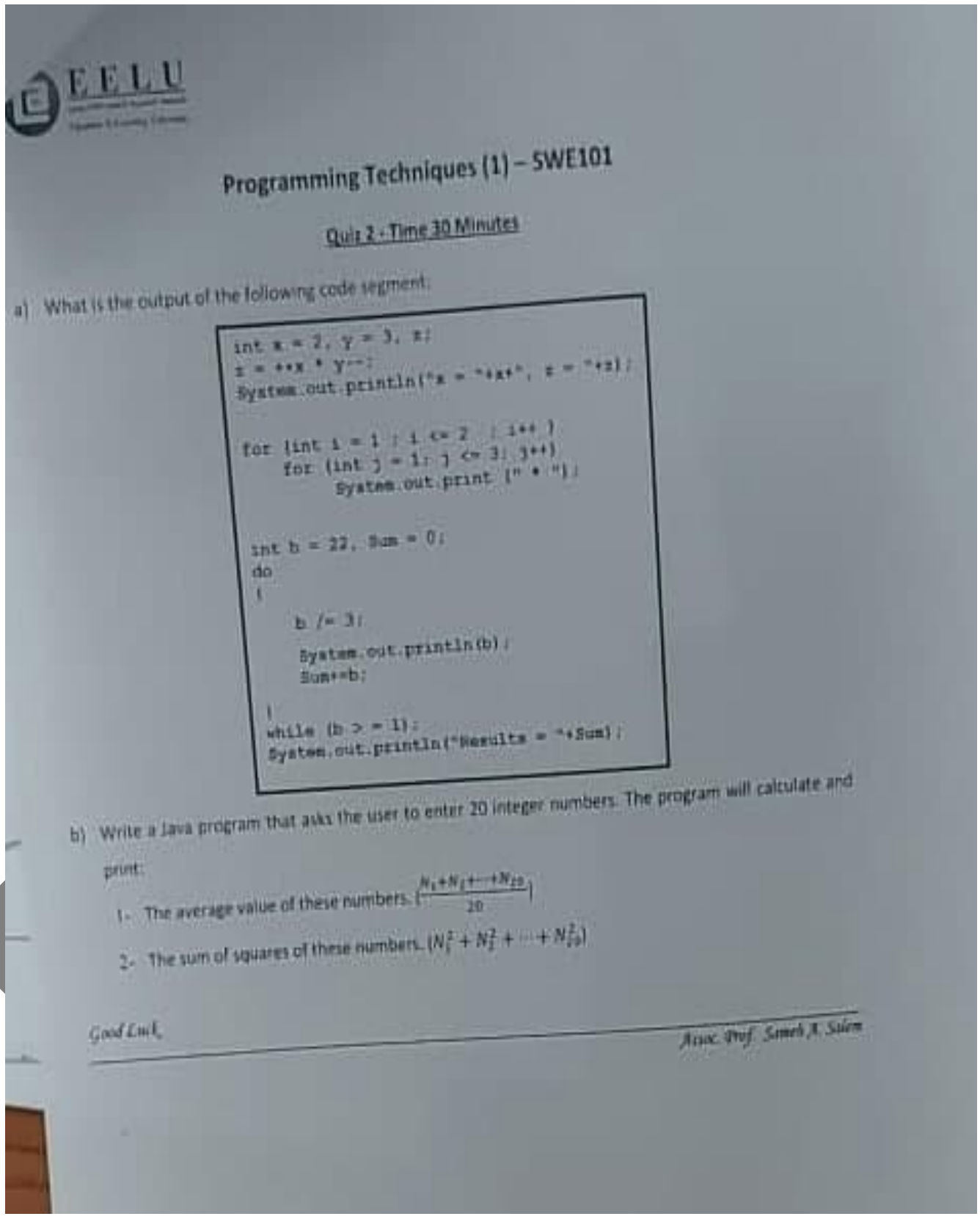
(c)

```
public class program3 {
public static void main(String[] args) {
      System.out.println("The two numbers are: " + (22 + 44) );
}
}
```

(d)

```
public class program4 {
public static void main(String[] args) {
      System.out.println("TESTING \t" + "123" );
}
}
```

END OF EXAM



E E L U

Programming Techniques (1) – SWE101

Quiz 2 - Time 30 Minutes

a) What is the output of the following code segment:

```
int x = 2, y = 3, z;
z = ++x * y--;
System.out.println("x = "+x+", z = "+z);

for (int i = 1 ; i <= 2 ; i++ )
    for (int j = 1; j <= 3; j++)
        System.out.print (" * ");

int b = 22, Sum = 0;
do
{
    b /= 3;
    System.out.println(b);
    Sum+=b;
}
while (b >= 1);
System.out.println("Results = "+Sum);
```

b) Write a Java program that asks the user to enter 20 integer numbers. The program will calculate and print:

1- The average value of these numbers. $\left(\frac{N_1+N_2+\cdots+N_{20}}{20}\right)$

2- The sum of squares of these numbers. $(N_1^2 + N_2^2 + \cdots + N_{20}^2)$

Good Luck,

Assoc. Prof. Sameh A. Salem

EELU

Programming Techniques (1) – SWE101

Quiz 1 - Time 30 Minutes

a) Write true (*T*) or False (*F*) for each of the following:

1- The Java compiler does not produce a machine language code. Instead, it produces a byte code which is not comprehensible by computers.

2- Structured language (Pseudo code) is a type of a diagram that represents an algorithm.

3- An algorithm is an ordered set of unambiguous executable steps that defines a terminating process.

4- Both pseudo code and flow charts increase the understanding of the algorithm.

5- Programming process consists of analysis, design, and then writing program codes.

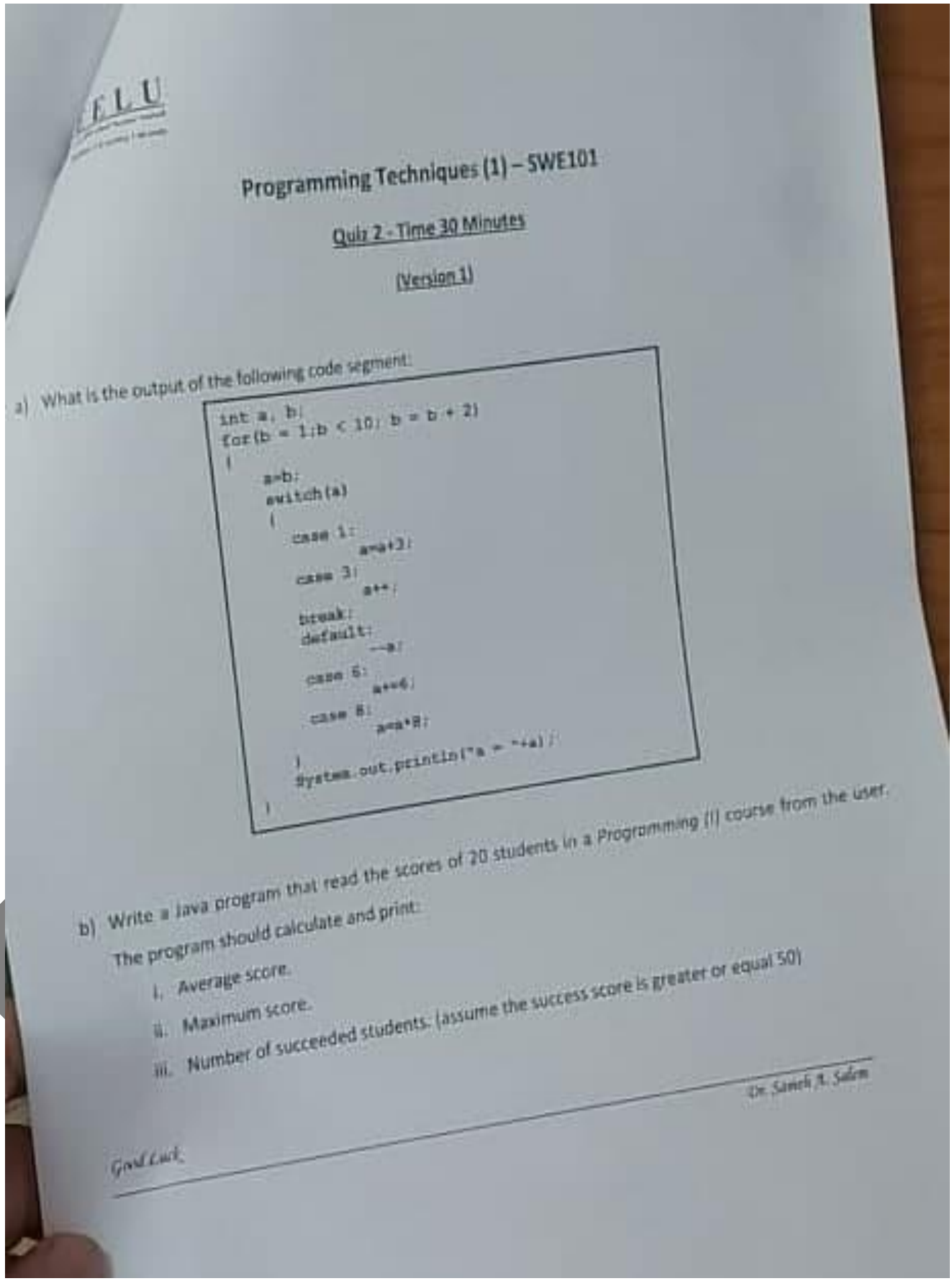
6- A compiler is a program that translates commands written using machine language into high level commands.

b) Draw a flowchart for an algorithm that asks the user to enter his/her *weight* (in kilogram) and *height* (in meters). Then, the algorithm calculates and displays a person's Body Mass Index (BMI) where $BMI = weight/height^2$. The algorithm should also display a message indicating whether a person has optimal weight, underweight, or overweight according to the following table.

Body Mass Index (*BMI*)	$BMI < 18.5$	$18.5 \leq BMI \leq 25$	$BMI > 25$
Weight Status	Underweight	Optimal weight	Overweight

Good Luck

Assoc. Prof. Samah A. Salem



Programming Techniques (1) – SWE101

Quiz 2 - Time 30 Minutes

(Version 1)

a) What is the output of the following code segment:

```
int a, b;
for(b = 1;b < 10; b = b + 2)
{
    a=b;
    switch(a)
    {
      case 1:
            a=a+3;
      case 3:
            a++;
      break;
      default:
            --a;
      case 6:
            a+=6;
      case 8:
            a=a*8;
    }
    System.out.println("a = "+a);
}
```

b) Write a Java program that read the scores of 20 students in a Programming (I) course from the user.

The program should calculate and print:

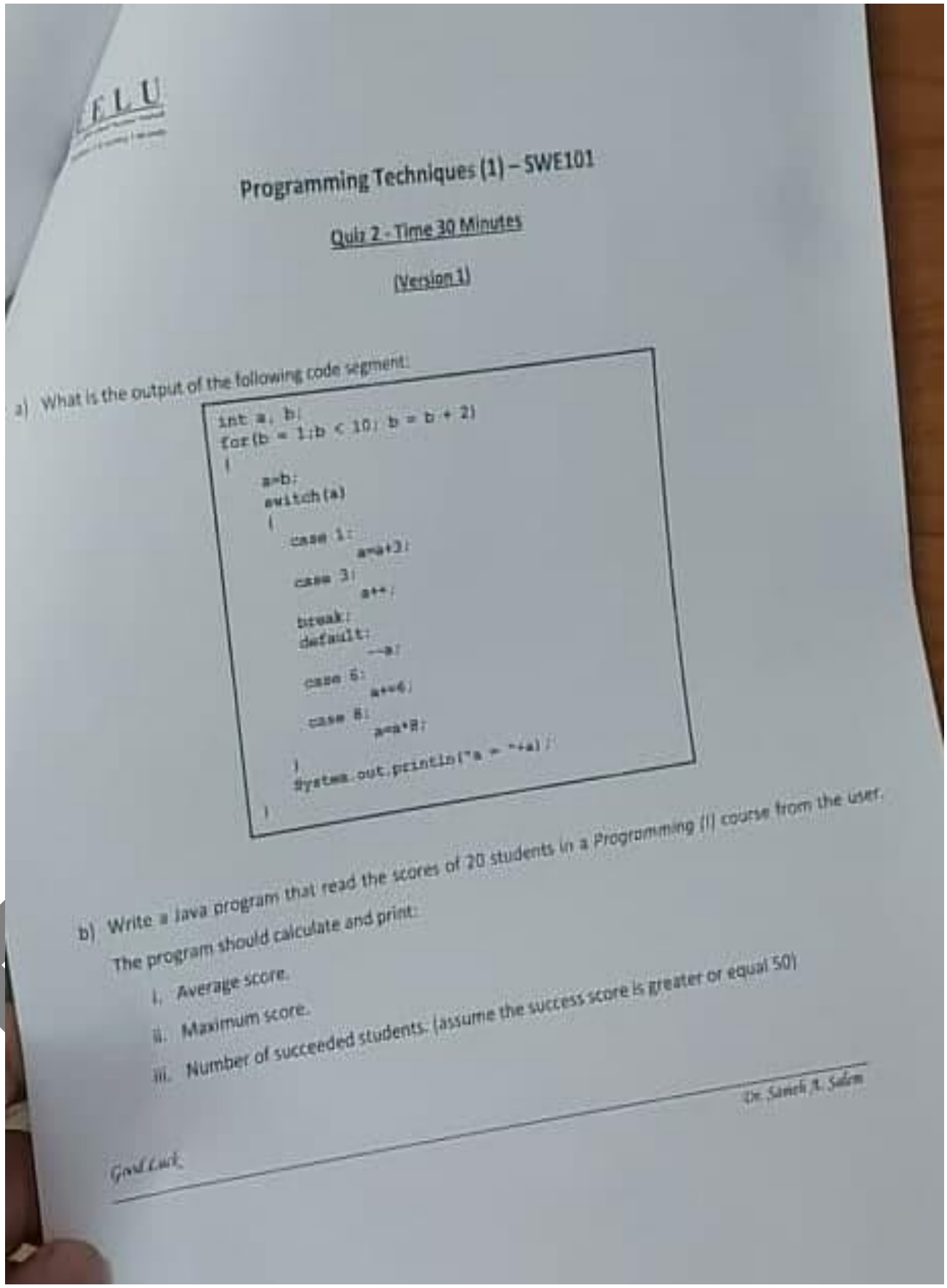
i. Average score.

ii. Maximum score.

iii. Number of succeeded students. (assume the success score is greater or equal 50)

Good Luck.

Dr. Sameh A. Salem



E L U

Programming Techniques (1) – SWE101

Quiz 2 - Time 30 Minutes

(Version 1)

a) What is the output of the following code segment:

```
int a, b;
for(b = 1;b < 10; b = b + 2)
{
    a=b;
    switch(a)
    {
      case 1:
            a=a+3;
      case 3:
            a++;
      break;
      default:
            --a;
      case 6:
            a+=6;
      case 8:
            a=a*8;
    }
    System.out.println("a = "+a);
}
```

b) Write a Java program that read the scores of 20 students in a Programming (I) course from the user.

The program should calculate and print:

i. Average score.

ii. Maximum score.

iii. Number of succeeded students. (assume the success score is greater or equal 50)

Good Luck.

Dr. Sameh A. Salem

...y of Computers and Information Technology
...se Name: Programming Techniques (1)
...rse code: SWE 101
...tructor: Assoc. Prof. Sameh A. Salem

EELU

Year:2018-2019 (Fall Semester)
Mid-Term Exam
Time allowed: 90 Minutes
Marks: 20

Answer the following questions

1) Write true (T) or false (F) for each of the following: [3 Marks]

1. An algorithm is an ordered set of unambiguous executable steps that defines a terminating process.
2. A compiler is a program that translates commands written using high level language into machine language commands.
3. Human language is the only language understood by computers.
4. If y = 128, then y *=2; will get y = $(128)^2$.
5. Variable name can start with a number.
6. Syntax errors are caught by the compiler and the program cannot run without fixing

2) Rewrite the following Java program after correcting the syntax errors: [3 Marks]

```
Clause App
(
    /*
       Welcome to EELU University
    @\
publac static void MAIN(String[] args);
[

        Integer x=2;
        if( 1 < x < 5)
            prntln(x);
        \\System.out.println("**** Programming (1) ****");
        Strong S;
        Scanr K=new Scanner(System.out);
        System.println('Please enter Your name:
        S=K.nextInt;
        Print("**** Good Bye ****+S).

    ]
)
```

3) Which of the following is a valid Java identifier (variable name)? [3 Marks]

1. $value
2. bank account
3. my-balance
4. name@hotmail
5. int
6. New_Student

Question Two: (5 Marks)

True or Fales?

1. The **print** method in Java is similar to the **println** method, except that it does not advance to the next line	[ ]
2. A **constant** in Java is an identifier that is similar to a variable except that it does not hold the same value during its entire existence	[ ]
3. In algorithmrepresentation, a very common, and natural, notation to express the repetition structure is: **while** (condition) **do** (activity)	[ ]
4. **Float** and **long** are two primitive data types in Java that can be used to represent floating point numbers.	[ ]
5. The string concatenation operator **(+)** is used to append one string to the end of another.	[ ]
6. A **variable**in Java can be given an initial value in the declaration such as ***int total = 50;***	[ ]
7. When the following Java code is executed **println("Sum = " + 45 + 22);** The output will be **Sum = 67**	[ ]
8. Comments in Java should be included to explain the purpose of the program and describe processing but they do not affect how a program works	[ ]
9. A program that is syntactically correct is necessarily logically (semantically) correct.	[ ]
10. An object in Java has a. **State**-which represents the descriptive characteristics b. **Behaviors**-which represents what it can do (or what can be done to it)	[ ]

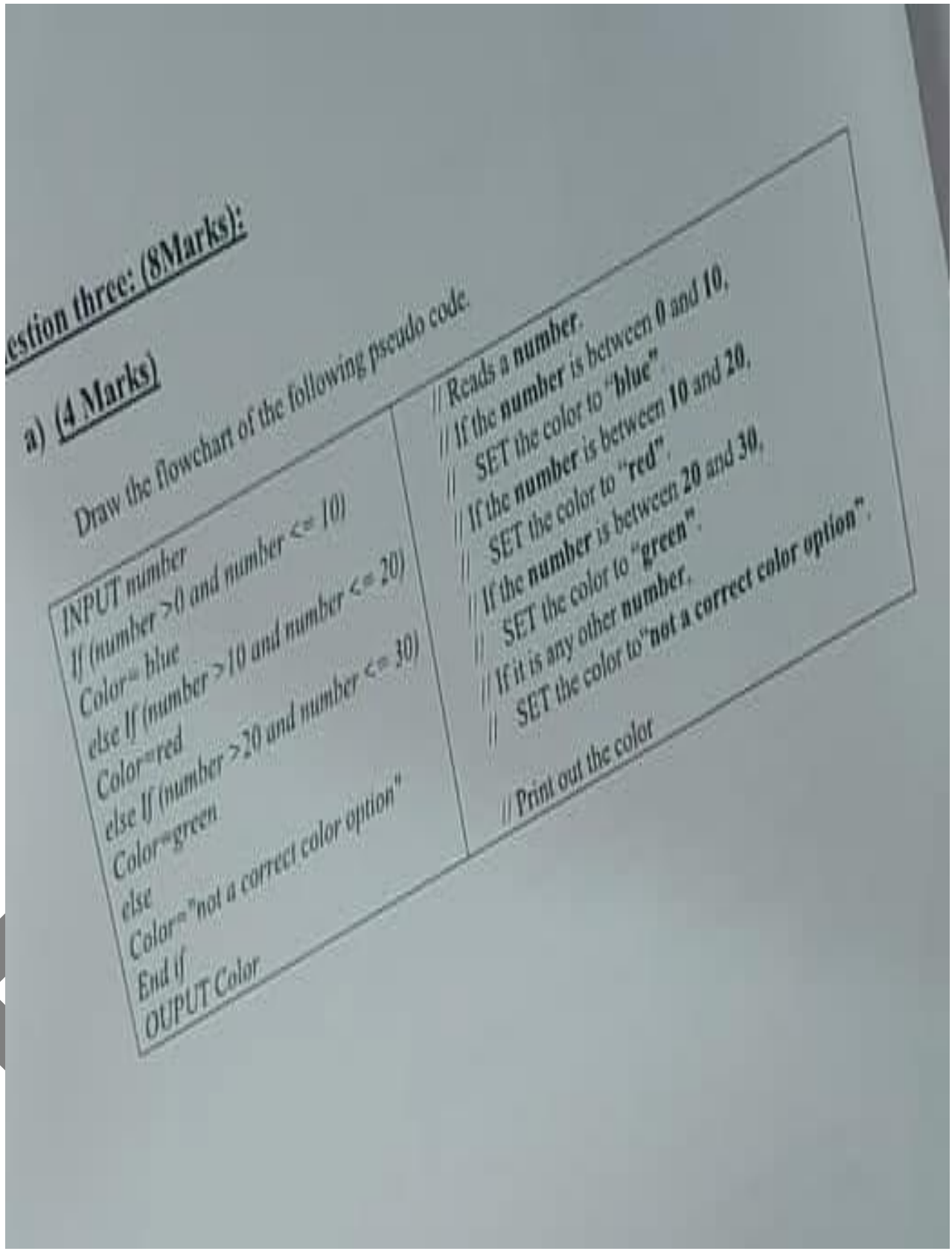
E101: Programming Techniques (1) – Fall 2014
. Mohamed Elwakil

EELU

Quiz	Marks	Date	Duration
#2-Ed2	5%	Dec-31	30 min.

1. What is Java Byte code? [1 point]
2. List the three types of loop statements [1 point]
3. What will this program print? [3 points]

```
1. public class SomeClass {
2.     public static void main (String [] args)
   {
3.         int   price = 70;
4.         float amount = 6;
5.         float diff = 2;
6.
7.         if (price >  70)
8.            diff = amount - price;
9.
10.             if (price < 20)
11.                diff = price - amount;
12.
13.             System.out.println ("Diff = " +
   diff);
14.         }
15.     }
```



estion three: (8Marks):

a) (4 Marks)

Draw the flowchart of the following pseudo code.

```
INPUT number                                  // Reads a number.
If (number >0 and number <= 10)               // If the number is between 0 and 10,
Color= blue                                   //   SET the color to "blue"
else If (number >10 and number <= 20)         // If the number is between 10 and 20,
Color=red                                     //   SET the color to "red"
else If (number >20 and number <= 30)         // If the number is between 20 and 30,
Color=green                                   //   SET the color to "green".
else                                          // If it is any other number,
Color="not a correct color option"            //   SET the color to"not a correct color option".
End if
OUPUT Color                                   // Print out the color
```

aculty of Computers and
nformation
WE101ProgrammingTechnique1
r. Haytham Azmi

EELU
THE EGYPTIAN E-LEARNING UNIVERSITY

Midterm Exam
Time: 90 minutes
Date: Nov4th, 2019
Total Marks: 20

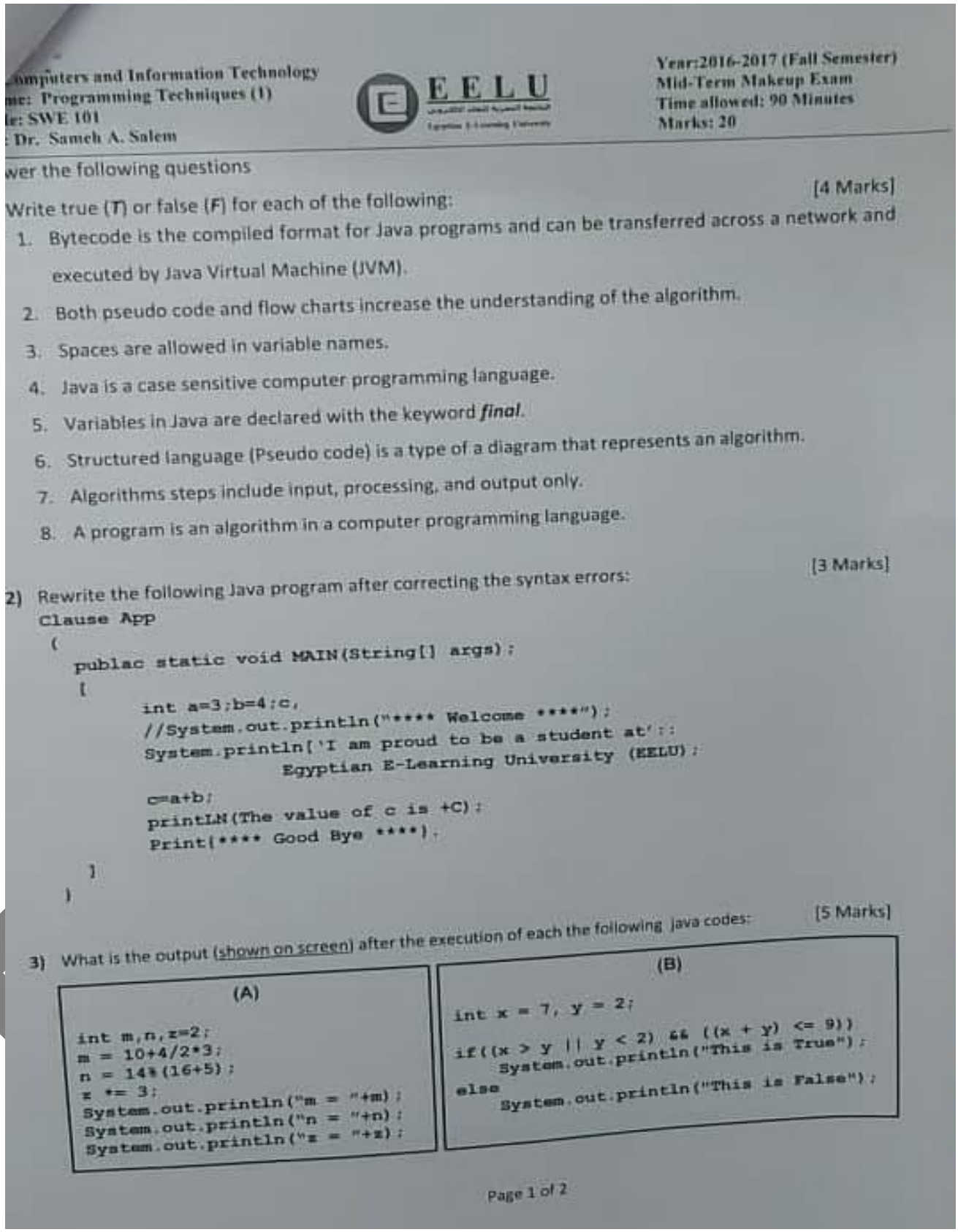
20

Answer the following questions:

Question One (7 Marks):

a) Write the pseudo code of a program that reads two numbers, adds them together and prints out their sum.(3Marks)

b) Draw a flow chart of a program that reads two numbers, find the biggest of the two numbers, and prints it out on the screen. (4 Marks)



...mputers and Information Technology
...me: Programming Techniques (1)
...le: SWE 101
...: Dr. Samch A. Salem

E E L U

Year:2016-2017 (Fall Semester)
Mid-Term Makeup Exam
Time allowed: 90 Minutes
Marks: 20

...wer the following questions

Write true (*T*) or false (*F*) for each of the following: [4 Marks]

1. Bytecode is the compiled format for Java programs and can be transferred across a network and executed by Java Virtual Machine (JVM).
2. Both pseudo code and flow charts increase the understanding of the algorithm.
3. Spaces are allowed in variable names.
4. Java is a case sensitive computer programming language.
5. Variables in Java are declared with the keyword ***final***.
6. Structured language (Pseudo code) is a type of a diagram that represents an algorithm.
7. Algorithms steps include input, processing, and output only.
8. A program is an algorithm in a computer programming language.

2) Rewrite the following Java program after correcting the syntax errors: [3 Marks]

```
Clause App
(
  publac static void MAIN(String[] args);
  {
        int a=3;b=4;c,
        //System.out.println("**** Welcome ****");
        System.println['I am proud to be a student at';:
                Egyptian E-Learning University (EELU);

        c=a+b;
        printLN(The value of c is +C);
        Print(**** Good Bye ****),

  }
)
```

3) What is the output (shown on screen) after the execution of each the following Java codes: [5 Marks]

(A)

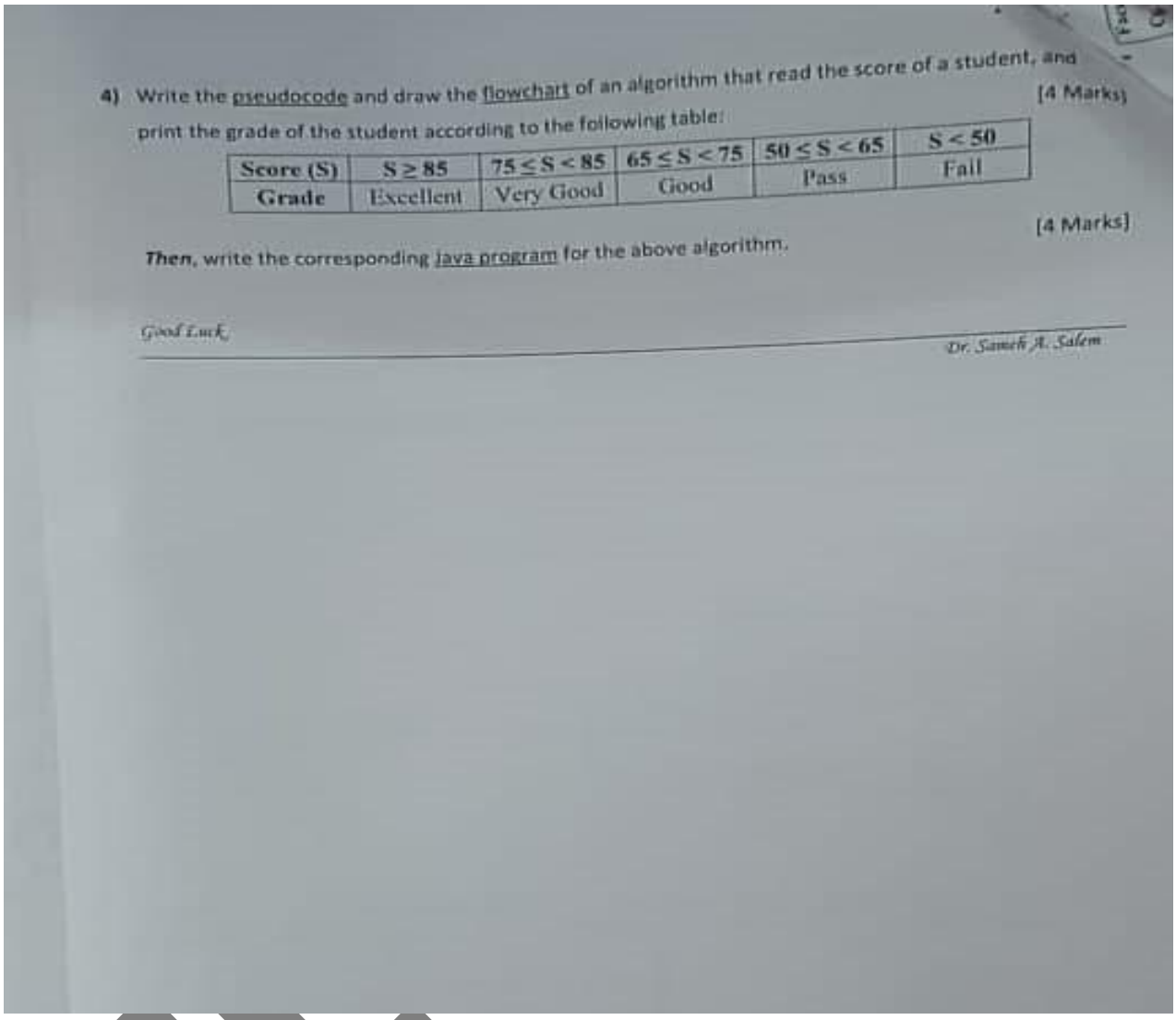
```
int m,n,z=2;
m = 10+4/2*3;
n = 14%(16+5);
z *= 3;
System.out.println("m = "+m);
System.out.println("n = "+n);
System.out.println("z = "+z);
```

(B)

```
int x = 7, y = 2;

if((x > y || y < 2) && ((x + y) <= 9))
    System.out.println("This is True");
else
    System.out.println("This is False");
```

Page 1 of 2



4) Write the pseudocode and draw the flowchart of an algorithm that read the score of a student, and print the grade of the student according to the following table: [4 Marks]

Score (S)	$S \geq 85$	$75 \leq S < 85$	$65 \leq S < 75$	$50 \leq S < 65$	$S < 50$
Grade	Excellent	Very Good	Good	Pass	Fail

Then, write the corresponding java program for the above algorithm. [4 Marks]

Good Luck

Dr. Sameh A. Salem