Information Technology Fundamentals
601105
Midterm Exam – 2025 (1)
Form B

Your
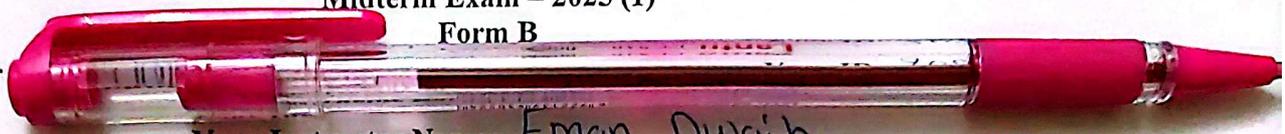
Your Instructor Name: .Eman....Dwaib

Instructions for the Exam:

- Write your name and ID number on the exam and answer sheets.
- Write the number of the section that you enrolled in.
- Write the name of your instructor.
- Questions in the exam not allowed.
- Using any type of technology (mobiles, smart watches) not allowed
- Using extra papers or sheets not allowed
- The exam consists of four questions.

For instructor use only:

Question number	Course ILO	Program ILO	Question weight	Student mark
Q1	K2		10	8
Q2			8	8
Q3	I1		7	1
Q4	P1		10	7.5
			Total /35	24.5

Question1: Choose the correct answer for the following questions: (10 marks)

1. A collection of data organized for easy access and manipulation is called:
   a) Record
   b) File
   c) Database
   d) Field

2. The set of instructions that make up solution to a problem is called:
   a) Program
   b) Result
   c) Documentation
   d) Computer software

3. Which of the following escape sequences moves the cursor to the beginning of the current line:
   a) \t
   b) \f
   c) \n
   d) \r

4. Which of the following is correct about Flowcharts:
   a) can be developed from algorithms
   b) They are the Graphical representations of the algorithms
   c) Show the flow of processing form beginning to end
   d) All options are correct

5. When using Scanner class, which of the following methods is used to obtain to a short value from the user:
   a) nextShort( )
   b) nextDouble( )
   c) next( )
   d) nextFloat( )

Question 2: Find the error in the following Java code and rewrite the corrected version. (8 marks)

[handwritten: 8]

A.

```
String temp = 38.7;

if(temp > 40) || (temp < 36)
    System.out.println("Go to hospital");
else if(temp >= 36.1 && temp <= 37.2)
    System.out.println("No fever");
else if(temp >= 37.3 && temp <= 38.5)
    System.out.println("Mild fever");
else if(temp >= 38.6 && temp <= 39.9)
    System.out.println("High fever");
```

[handwritten: double temp = 38.7;]
[handwritten: if (temp>40)]
[handwritten: System.out.println("go to hospital")]

B.

```
int c = 2026;
if(c > 2025)
    system.out.println(Happy New Year);
```
[handwritten: System.out.println ("Happy New Year");]

Question 3: Find the output of the following java programs: (7 marks)

[handwritten: 13]

A.

```
class Test{
public static void main(String[] args) {
    float a = 67.5f;
    System.out.println("Integer number: " + (int) a);
    System.out.println("Fractional number: " + (a - (int) a));

    }


}
```

Output:

[handwritten: Integer number: (int) 67.5f
Fractional numer: (67.5f - (int) 67.5f))]
[handwritten: 0]

B.

```
class Test2{
public static void main(String[] args) {
    Scanner input = new Scanner(System.in);
    int x, y;
    System.out.print("Please enter value of x: ");
    x = input.nextInt();   // assume x = 5
    y = 2 + x--;
    y--;
    System.out.println("The values of x and y are: x is " + x + ", y is " + y);
    }

}
```

[handwritten: y = 2 + 4
y = 6
y-- = 4]

Q2)

a)

```
double temp = 38.7;

IF (temp ≤ 36)

IF (temp ≥ 36.0 && temp ≤ 37.0)
    System.out.println("no fever");

else IF (temp ≥ 37.5 && temp ≥ 38.0)
    System.out.println("Mild fever");

else IF (temp ≥ 38.65 && temp ≥ 39.0)
    System.out.println("high fever");

else IF (temp ≥ 39.5 && temp ≤ 40.0)
    System.out.println("go to hospital");
```

Output:

~~x=y~~

~~c=c~~
X = 5; ✗
y = 4; ✗

C. What does the **switch** statement output when the variable **num** is 3?

```java
Scanner input = new Scanner(System.in);
    int num = input.nextInt();

    switch (num) {
        case 1:
            System.out.println("Mira");
            break;
        case 2:
            System.out.println("Ahmad");

        case 3:
        case 5:
            System.out.println("Besan");

        default:
            System.out.println("Suzan");
            break;
    }
```

Output:

In Case 2 , the user didn't add (break;)
after the case, so in case 3 it will
~~Courtin~~ Continue printing Case 2.

("Ahmad") ✗

Question 4: Write an algorithm (pseudocode), draw a flowchart, and write a Java program that reads an employee's monthly salary and years of experience. Using a Two-Way If–Else statement, determine whether the employee qualifies for a promotion based on the following rules: **(10 marks)**
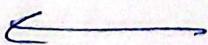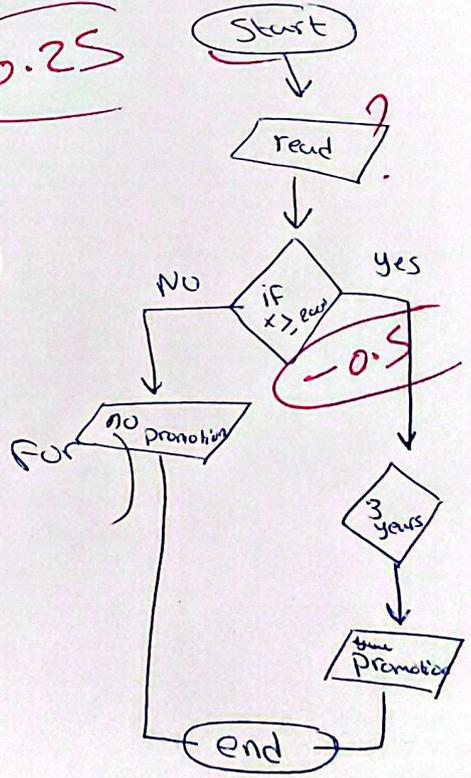
7.5

- The employee's salary must be 2000 or higher.
- The employee must have at least 3 years of experience.

If the employee meets both conditions, the program should display: "You qualify for a promotion.". Otherwise, it should display: "You do not qualify for a promotion.".

Start

read ?!

(-1)

If employee's salary ~~2000~~ X $\geq$ 2000

~~read~~ ~~you~~

(-0.25)

— and 3 years experience

print (you qualify for a promotion)

else

~~cumple~~

Print (you do not qualify for a promotion)

end.

$\leftarrow$

Start

read

No   if x $\geq$ years   yes

(-0.5)

no promotion

3 years

you Promotion

end

```java
import        java.util.Scanner;
public        ~~Cla Cla~~ Salary {
                  Class
      public  Static  void  main (String [] args) {
Scanner input = new  Scanne (System.in);
      Intx= 2000;  ✗
System. out. println ("please enter Salary");
    x 0 = Input . next Int () ;          ( - 0.5
    IF {
       (Salary ≥ 2000 ) && ( -0.25

       ( 3 > y )

       }

    System. ~~print. ccebb~~ ("you qualify For a Promotion");
              out  println

    else {
       System. out. println ("you do not qualify for"
                                 a Promotion        );

       }

    }

}
```