Information Technology Fundamentals
601105
Midterm Exam – 2025 (1)

Your Name: ....

Your Instructor Name: Eman ....

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	4
Q2			8	8
Q3	I1		7	1
Q4	P1		10	4.75
			Total /35	17.75

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( )

(handwritten top: float-... Int x, char x, boolean x)

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

(handwritten: Scanner; Reads user input) *(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 correction, float/decimal no.:)
```
float temp = 0;
Scanner input = new Scanner(System.in);
System.out.println("Enter Temp");
temp = input.nextFloat();
if(temp > 40 || temp < 36)
System.out.println("Go to hospital");
```
(4)

B.

```
int c = 2026;
if(c > 2025)
    system.out.println(Happy New Year);
```

(handwritten correction:)
```
int c = 2026;
if(c > 2025)
System.out.println("Happy New Year");
```
(4)

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

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));
    }
}
```
(1)

Output:

(handwritten:) Integer number: 67.5 ✗
Fractional number: 67.5 ... ✗   *(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: 5→1 ; 4+2=6 −1 =5)

Output:

The Values of x and y are: x is _5_ y is _5_

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

```
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:

Suzan

$\checkmark$

○ Sfurt
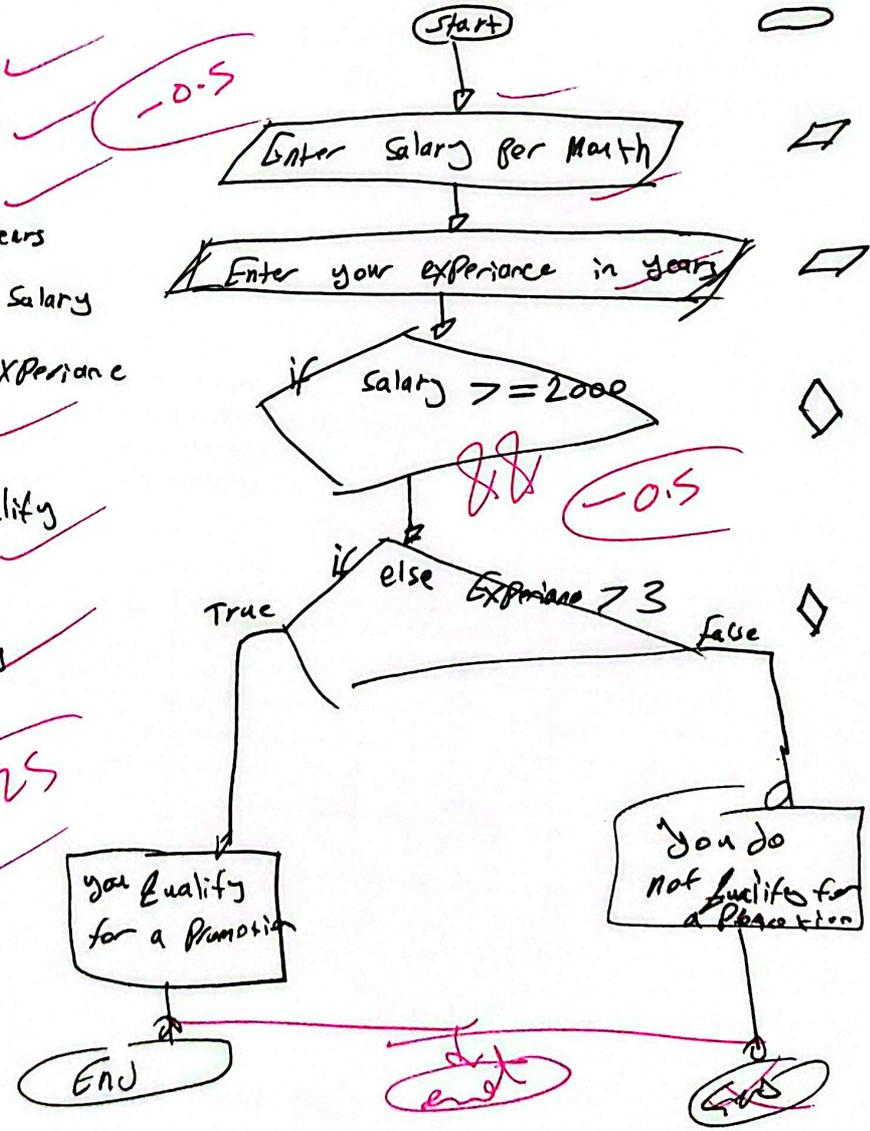▱ calaltion
▱ Entr A
◇ if

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)**

$\checkmark$ **4.75**

- 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
- Promt user employee to enter salary /month   (-0.5)
- Proat user employee to enter experiance/years
- if the employee salary ≥ 2000 and years of experiance >3 years
- Display "you qualify for a Promotion"
- Else, Display "you do not qualify for a promotion"
- end   (-0.25)

Flowchart:
Start → Enter Salary per Month → Enter your experiance in years → if Salary >=2000 && else Experiane >3 (-0.5) → True: you qualify for a Promotion → End; False: you do not qualify for a promotion → end

○
▱
▱
◇
◇

Missing Code (-4