Model

University of Petra		جامعة البترا - ثلاثون عاماً University of Petra
Faculty of Information Technology	جامعة البترا	كلية تكنولوجيا المعلومات
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Information Technology Fundamentals
601105
Midterm Exam – 2025 (1)
Form A

Your Name: ....   Your ID: ....

Your Instructor Name: ....

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	
Q2			8	
Q3	I1		7	
Q4	P1		10	
			Total /35	

Form A

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

1. Several related fields can be used to compose_____
   a) **Record**
   b) File
   c) Database
   d) Field

2. A collection of programs used by a computer, such as an editor, is called:
   a) Program
   b) Result
   c) Documentation
   d) **Computer software**

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

4. Which of the following is correct about Pseudocode:
   a) It is an informal language that helps you develop algorithms without having to worry about the strict details of Java language syntax
   b) It helps you "think out" a program before attempting to write it in a programming language
   c) It does not execute on computers
   d) **All options are correct**

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

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

A.

```
int num = 9;        ==
if(num % 3 = 0)
    System.out.println("Divisible by 3");
else
    System.out.println("Not divisible");
```

B.

```
char c = "G";       'G'
if(c >= 65 && c <= 90);
    System.out.println("Capital letter");
else
    System.out.println("Not capital");
```

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

A.

```java
class Test{
public static void main(String[] args) {
    int num1 = 9;
    int num2 = 18;

    if (num1 <= num1 * num2) {
        System.out.println("Cybersecurity");
    } else {
        System.out.println("Computer science");
    }
  }
}
```

Output:

Cybersecurity

B.

```
class Test2{
public static void main(String[] args) {
    int X = 50;
    int Y = 4;
    X = X + Y;
    System.out.println(++X);
    System.out.println(++X);
    System.out.println(Y++);
    System.out.println(X + 2);
    }
}
```

Output:

```
55
56
4
58
```

C. What does the **switch** statement output when the variable **num is 5** ?

```
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:

```
Besan
Suzan
```

Question 4: Write an algorithm (pseudocode), draw flowchart and write a Java program that reads a student's GPA and the number of completed credit hours. Using a Two-Way If–Else statement, check whether the student meets the following requirements:**(10 marks)**

- The student's GPA must be 3.5 or higher.
- The student must have completed at least 30 credit hours.

If the student meets both requirements, the program should print: "Congratulations! You are on the Honor List.". Otherwise, it should print: "You do not qualify for the Honor List.".

Psedocode: 3 marks
1. start //0.25
2. prompt user to enter GPA //0.25
3. read GPA //0.25
4. prompt user to enter Comp. Credit hours//0.25
5. read hours //0.25
6. if GPA≥3.5 and hours ≥30 //0.5
   7 print "Congrat.! you are..." 0.25
   else //0.5
      print "You do not....." 0.25
7. end //0.25

Flowchart: 3 marks
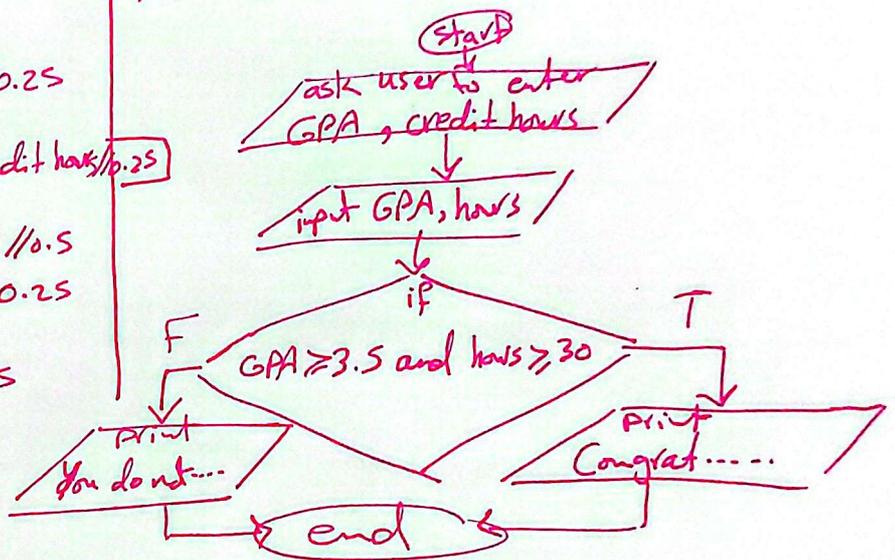
```
import java.util.Scanner; //0.25
public class Test{  //0.25
   public static void main (String args[]){  //0.25
      Scanner input = new Scanner (System.in); // 0.25
      double gpa; //0.25
      int hours; //0.25
      S.O.Pln ("enter GPA"); //0.25
      gpa = input.nextDouble(); //0.25
      S.O.Pln ("enter hours"); //0.25
      hours = input.nextInt(); // 0.25
      if (gpa >=3.5 && hours >=30){ //0.5
         S.O.Pln ("Congrats ... "); //0.25
      else //0.5
         S.O.Pln ("You do not ...."); //0.25
   }
}
```