### **Question 1 [8 Points]**

Suppose, you work for a gift shop called “One Price Store” and your job is to calculate the total and VAT amount for a purchase. Here, each item is worth 150 tk.

Draw a flowchart that takes the quantity of gift items as input and calculates the VAT that will be applied on the total price and then the total amount. Here, **7% VAT** is applied on the total price.

| **Sample Case 1** | **Sample Case 1** |
| --- | --- |
| **Sample Input:**  Gift quantity: 7 | **Sample Input:**  Gift quantity: 13 |
| **Sample Output:**  Vat: 73.5 tk  Total amount: 1123.5 tk | **Sample Output:**  Vat: 136.5 tk  Total amount: 2086.5 tk |
| **Explanation:**  Here, the price is = 7 \* 150 = 1050  VAT = 7% of 1050 = 73.5  Total price: 1123.5 | **Explanation:**  Here, the price is = 13 \* 150 = 1950  VAT = 7% of 1950 = 136.5  Total price: 2086.5 |

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### **Question 2 [5 Points]**

**Write the output for the following operations:**

| **Sl.** | **Operations** | **Output** |
| --- | --- | --- |
| 1. | System.out.println( 35 % 12 ) |  |
| 2. | System.out.println( 36 % 5 🞶 24 / 4) |  |
| 3. | System.out.println( “Quiz (0+1)” ) |  |
| 4. | System.out.println( true && !( true || false ) ) |  |
| 5. | System.out.println( 5 == 5 || 33 <= 30 ) |  |

### **Question 3 [7 Points]**

Write a Java program that takes a 3 digit number as an integer input from the user and calculates the sum of all the digits.

| **Sample Case 1** | **Sample Case 1** |
| --- | --- |
| **Sample Input:**  Enter a 3 digit number: 123 | **Sample Input:**  Enter a 3 digit number: 584 |
| **Sample Output:**  Sum: 6 | **Sample Output:**  Sum: 17 |
| **Explanation:**  Here, the input is = 123  Sum = 1 + 2 + 3 = 6 | **Explanation:**  Here, the input is = 584  Sum = 5 + 8 + 4 = 17 |

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