**Question-1: Logic for a program that prints every number from 10 through 15.**

**IPO**

|  |  |  |
| --- | --- | --- |
| **Input** | **Processing** | **Output** |
| **Counter** | **Increment by number 2** | **Print 10 to 15** |

**Pseudocode**

|  |  |
| --- | --- |
| **1** | **Start** |
| **2** | **Counter = 10** |
| **3** | **While counter <=15** |
| **4** | **Print counter** |
| **5** | **Counter = counter + 2** |
|  | **ENDWHILE** |
| **6** | **END** |

**Desk Checking**

|  |  |  |
| --- | --- | --- |
| **STEP** | **COUNTER** | **PRINT** |
| **2** | **10** |  |
| **3** | **TRUE** |  |
| **4** |  | **10** |
| **5** | **12** |  |
| **3** | **True** |  |
| **4** |  | **12** |
| **5** | **14** |  |
| **3** | **True** |  |
| **4** |  | **14** |
| **5** | **16** |  |
| **3** | **False** |  |
|  |  |  |

**Question-2: Logic for a program that prints every number from 10 through 1.**

**IPO**

|  |  |  |
| --- | --- | --- |
| **Input** | **Processing** | **Output** |
| **Counter** | **Decreasing by number 1** | **Print 10 to 1** |

**Pseudocode**

|  |  |
| --- | --- |
| **1** | **Start** |
| **2** | **Counter = 10** |
| **3** | **While counter => 1** |
| **4** | **Print counter** |
| **5** | **Counter = counter -1** |
|  | **ENDWHILE** |
| **6** | **END** |

**Desk Checking**

|  |  |  |
| --- | --- | --- |
| **STEP** | **COUNTER** | **PRINT** |
| **2** | **10** |  |
| **3** | **TRUE** |  |
| **4** |  | **10** |
| **5** | **9** |  |
| **3** | **True** |  |
| **4** |  | **9** |
| **5** | **8** |  |
| **3** | **True** |  |
| **4** |  | **8** |
| **5** | **7** |  |
| **3** | **True** |  |
| **4** |  | **7** |
| **5** | **6** |  |
| **3** | **True** |  |
| **4** |  | **6** |
| **5** | **5** |  |
| **3** | **True** |  |
| **4** |  | **5** |
| **5** | **4** |  |
| **3** | **True** |  |
| **4** |  | **4** |
| **5** | **3** |  |
| **3** | **True** |  |
| **4** |  | **3** |
| **5** | **2** |  |
| **3** | **True** |  |
| **4** |  | **2** |
| **5** | **1** |  |
| **3** | **True** |  |
| **4** |  | **1** |
| **5** | **0** |  |
| **3** | **False** |  |
| **4** |  | **End** |