

List of Orders to be Fulfilled and Date of Fulfillment

1. Order OR131 from Small Bazaar will be fulfilled on March 15.
2. Order PO456 from Then Grocery will be fulfilled on March 15.
3. Order OR142 from Small Bazaar will be fulfilled on March 20.
4. Order PO657 from Then Grocery will be fulfilled on March 20.
5. Order OR153 from Small Bazaar will not be fulfilled due to insufficient quantity of P001 (Milk Chocolate) on March 25.
6. Order PO854 from Then Grocery will not be fulfilled due to insufficient quantity of P001 (Milk Chocolate) on March 25.

Reasoning behind Fulfillment

To determine which orders can be fulfilled, we need to consider the available inventory and manufacturing capacity of TIIK chocolates.

On March 15, TIIK chocolates has the following available quantities:

- P001 (Milk Chocolate): 3,000
- P002 (Dark Chocolate): 3,000

Orders:

1. OR131 from Small Bazaar:

- Order Quantity (P001): 2,000
- Order Quantity (P002): 1,000

Since the available quantity of both P001 and P002 is sufficient, this order can be fulfilled on March 15.

2. PO456 from Then Grocery:

- Order Quantity (P001): 1,000
- Order Quantity (P002): 500

Since the available quantity of both P001 and P002 is sufficient, this order can be fulfilled on March 15.

On March 20, TIIK chocolates has the following available quantities:

- P001 (Milk Chocolate): 3,000 (Initial quantity) + 500 (Manufactured on March 15) = 3,500
- P002 (Dark Chocolate): 3,000 (Initial quantity) + 500 (Manufactured on March 15) = 3,500

Reasoning behind Fulfillment

Orders:

1. OR142 from Small Bazaar:

- Order Quantity (P001): 2,000
- Order Quantity (P002): 500

Since the available quantity of both P001 and P002 is sufficient, this order can be fulfilled on March 20.

2. PO657 from Then Grocery:

- Order Quantity (P001): 2,000
- Order Quantity (P002): 1,500

Since the available quantity of both P001 and P002 is sufficient, this order can be fulfilled on March 20.

On March 25, TIIK chocolates has the following available quantities:

- P001 (Milk Chocolate): 3,500 (Initial quantity) + 500 (Manufactured on March 20) = 4,000
- P002 (Dark Chocolate): 3,500 (Initial quantity) + 500 (Manufactured on March 20) = 4,000

Reasoning behind Fulfillment

Orders:

1. OR153 from Small Bazaar:

- Order Quantity (P001): 1,000
- Order Quantity (P002): 1,500

Since the available quantity of P001 (Milk Chocolate) is insufficient (only 4,000 available), this order cannot be fulfilled on March 25.

2. PO854 from Then Grocery:

- Order Quantity (P001): 500
- Order Quantity (P002): 500

Since the available quantity of P001 (Milk Chocolate) is insufficient (only 4,000 available), this order cannot be fulfilled on March 25.

Calculations

Inventory on March 15:

- P001 (Milk Chocolate): 3,000
- P002 (Dark Chocolate): 3,000

Inventory on March 20:

- P001 (Milk Chocolate): 3,000 (Initial quantity) + 500 (Manufactured) = 3,500
- P002 (Dark Chocolate): 3,000 (Initial quantity) + 500 (Manufactured) = 3,500

Inventory on March 25:

- P001 (Milk Chocolate): 3,500 (Initial quantity) + 500 (Manufactured) = 4,000
- P002 (Dark Chocolate): 3,500 (Initial quantity) + 500 (Manufactured) = 4,000

Based on the available inventory and manufacturing capacity, the orders that can be fulfilled are listed in Slide 1.