Introduction to Supply Chain Management

Certified Inventory Optimization Professional (CIOP)
Based on IMBoK v3.0 from Integrated Institute of Supply Chain Management
Sectors of Economy

Primary
- 3F1M
  - Farming
  - Fishing
  - Forestry
  - Mining

Secondary
- Manufacturing
- Construction

Tertiary
- Retail
- Warehousing
- Transportation
- Banking
- Education
- Insurance
- etc.

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1. Define economy.
2. Name the sectors of an economy.
3. Describe Primary, Secondary and Tertiary sectors with examples.
4. How these sectors and supply chain are connected?
5. What is value and how value is added by these sectors?
6. All product supply chains originate from primary sector. Understand this assertion with a case study on cookies.
7. What is GDP and how it is measured?
8. GDP values and comparison of countries. Examples from developed, developing and underdeveloped economies.
10. End-to-end supply chain flows through all the three sectors.

Refer CIOP-LO-Notes M01-01 in LMAS for key points
The Three Dimensions of Inventory

Types of Inventory
- Raw materials
- Work-In-Process
- Finished Goods
- Distribution Inventory
- MRO

Functions of Inventory
- Safety Stock
- Cycle Stock
- Buffer Inventory
- Hedge Inventory
- Decoupling Inventory
- Anticipation Inventory

Nature of Demand
- Dependent
- Independent

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The Three Dimensions of Inventory

1. Define inventory.
2. Name the types of inventory.
3. Name the functions of inventory.
4. Name the natures of demand.
5. Understand that all inventories exists in all the three dimensions. Discuss with an example.

Note: You will learn inventory in more detail under Module-02: All About Inventory.

Refer CIOP-LO-Notes M01-07 in LMAS for key points
# The 20 Key Supply Chain Processes

## Supply Chain Processes

<table>
<thead>
<tr>
<th>Planning</th>
<th>Distributing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sourcing</td>
<td>Returning</td>
</tr>
<tr>
<td>Negotiating</td>
<td>Bonding</td>
</tr>
<tr>
<td>Contracting</td>
<td>Securing</td>
</tr>
<tr>
<td>Purchasing</td>
<td>Analysing</td>
</tr>
<tr>
<td>Transporting</td>
<td>Measuring</td>
</tr>
<tr>
<td>Transforming</td>
<td>Improving</td>
</tr>
<tr>
<td>Replenishing</td>
<td>Disposing</td>
</tr>
<tr>
<td>Fulfilment</td>
<td>Compliance</td>
</tr>
<tr>
<td>Storing</td>
<td>Financing</td>
</tr>
</tbody>
</table>

## Processes Analysis

<table>
<thead>
<tr>
<th>What is a process?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Process overview</td>
</tr>
<tr>
<td>Process boundaries</td>
</tr>
<tr>
<td>Activities and Tasks associated with the process</td>
</tr>
<tr>
<td>SIPOC diagram</td>
</tr>
<tr>
<td>Values delivered by the process</td>
</tr>
<tr>
<td>Key parameters</td>
</tr>
</tbody>
</table>
The 20 Key Supply Chain Processes

1. Define process.
2. Key benefits of process-centric approach.
3. Why understanding a process is important?
4. What is a process boundary?
5. Why a process should deliver value?
6. List the 20 key supply chain processes and describe them.
7. Explain the 20 processes for an automotive OEM.
8. Describe SIPOC diagram.

Refer CIOP-LO-Notes M01-09 in LMAS for key points
Manufacturing Strategy

- Engineer-to-Order
- Make-to-Order
- Configure-to-Order
- Assemble-to-Order
- Postponement
- Make-to-Stock
Manufacturing Strategy

1. Define manufacturing strategy.
2. Explain manufacturing lead time and customer lead time.
3. Discuss each strategy with prominent examples.
4. Why low customer lead time strategies are costly within a given industry? Explain with a food products company.
5. How these manufacturing strategies impact what is being forecasted in an organisation? Give examples.

Refer CIOP-LO-Notes M01-13 in LMAS for key points
Three Entities and Four Flows

Product Flow

Cash Flow

Information Flow

Reverse Product Flow

Supplier -> Physical Supply -> Physical Distribution -> Customer

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Three Entities and Four Flows

1. Name the three entities in a basic model of supply chain.
2. Name the four flows.
3. Differentiate between a supplier and a vendor.
4. Differentiate between customers and consumers.
5. Explain the characteristics of product flow and give examples.
6. Explain the characteristics of cash flow and give examples.
7. Explain the characteristics of information flow and give examples.
8. Explain the characteristics of reverse product flow and give examples.
9. Why reverse product flow exists?
10. What is the impact of reverse product flow on the profitability of an organisation?
11. What are all the factors that forces a company to have the reverse product flow?
12. Why most of the companies have a separate supply chain for reverse product flow?
13. Give some examples where the forward and reverse product flows are served by the same supply chain.

Refer CIOP-LO-Notes M01-21 in LMAS for key points
Questions & Answers