Chapter 4

- Types of Inventory Control Systems

Basic Types of Inventory Control Systems

- Fixed-order quantity model
- Fixed-time period model

Features of Fixed-Order Quantity Model

- Order Quantity = Constant
- When to place an order = When inventory position drops to a re-order level
- Record keeping = Each time a withdrawal or addition is made
- Size of inventory = Less than fixed-time period model

Features of Fixed-Time Period Model

- Order Quantity = Variable
- When to place an order = When the review period arrives
- Record keeping = Counted or checked only at review period
- Size of inventory = Larger than fixed-order quantity model

Selective approach to Inventory Control

- Focus should be on the ost important items in inventory in order to reduce their inventory levels.

Definition of Selective Inventory Control

- Selective Inventory Control means that the method of inventory control varies from item to item and the differentiation should be on a selective basis.

Selective Inventory Control Techniques

- A-B-C Analysis
- X-Y-Z Analysis
- V-E-D Analysis
- F-S-N Analysis
- H-M-L Analysis
- S-D-E Analysis
- S-O-S Analysis
- G-O-L-F Analysis

Features of A-B-C Analysis

- Criteria = Annual consumption value of the item to control inventory of raw materials and WIP inventory.
- Classification of items on the basis of A, B, C.
- On the basis of Pareto's principle "the vital few and trivial many" or, 80 / 20 rule.

Advantage of ABC Analysis

- By controlling the inventory of ‘A’ category items, the total inventory costs can be considerably reduced.

Limitations of ABC Analysis

- To be effective, it should be carried out with standardization and codification
- Importance to item is given on its annual consumption value and not on its criticality for the production
- Periodical Review is necessary to take into account the changes in prices and consumption

Features of X-Y-Z Analysis

- Based on value of inventory of materials actually held in stores at a given time.
- Actual inventory value of items in stores instead of their estimated annual consumption value

Features of V-E-D Analysis

- Usually applied for spare parts on the basis of criticality.
- Classification is on the basis of ‘V’ stands for vital, ‘E’ for essential, ‘D’ for desirable.

Features of FSN Analysis

- FSN stands for Fast moving, Slow moving and Non moving items
- The classification is based on past consumption pattern
- Useful to control obsolescence of raw materials, components, tools and spare parts

Features of HML Analysis

- HML stands for High value, Medium value and Low value items based on unit price of the item.
- On this basis, Materials management may delegate authority to various levels of purchase officers to authorize and sign Purchase Orders.

SDE Analysis

- SDE stands for Scarce items, Difficult to produce items and Easy to procure items

Features of SOS Analysis

- SOS stands for Seasonal items and Off-Seasonal items
- It may be advantageous to buy seasonal item at low prices and keep inventory or buy at high price during off seasons

GOLF Analysis

- GOLF stands for Government, Open market, Local or Foreign source of supply.

Combination Approach

- ABC with XYZ Classification
- ABC with VED Classification
- XYZ with FSN Classification
- XYZ with VED Classification

ABC with XYZ Classification

Class of items → / ↓	X	Y	Z
A	AX	AY	AZ
B	BX	BY	BZ
C	CX	CY	CZ

ABC with VED Classification

Class of items	V	E	D
A	AV	AE	AD
B	BV	BE	BD
C	CV	CE	CD

XYZ with FSN Classification

Class of items	F	S	N
X	XF	XS	XN
Y	YF	YS	YN
Z	ZF	ZS	ZN

XYZ with VED Classification

Class of items	V	E	D
X	XV	XE	XD
Y	YV	YE	YD
Z	ZV	ZE	ZD