

A person is sitting on a dark rock in the foreground, looking up at a vast night sky filled with stars and the Milky Way galaxy. The galaxy's bright, orange and white band stretches across the sky from the top left towards the center. The background is a deep blue and black, dotted with countless stars of various colors.

SCM

**METHODS OF  
INVENTORY  
CONTROL**

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## **Methods of Inventory Control | Materials Management**

There are some selective inventory control methods to have an effective control on the inventory.

The important methods are:

1. ABC Analysis (Always Better Control)
2. VED Analysis (Vital, Essential, Desirable)
3. FSN Analysis (Fast, Slow moving and Non-moving)
4. SDE Analysis (Scarce, Difficult, Easy)
5. HML Analysis (High, Medium, Low)
6. Just-In-Time (JIT) Inventory System

<https://www.businessmanagementideas.com/material-management/inventory-control-material-management/methods-of-inventory-control-materials-management/12033>

## **Method # 1. ABC Analysis:**

One of the widely used techniques of inventory control is the ABC (Always Better Control) analysis. This analysis is based on the annual consumption of inventory items in a year.

- a. Only a small number of inventory items consume a very large share of inventory consumption during the year.
- b. A little larger number of inventory items covers a moderate share of annual inventory consumption.
- c. A very large number of items just cover a very small share of annual inventory consumption.

These facts gave birth to the concept of ABC analysis. The ABC approach is a means of categorizing inventory items into three classes 'A', 'B' and 'C'.

### **. Class A items:**

10% of items have 70% of the annual inventory consumption.

### **b. Class B items:**

20% of the items have 20% of annual inventory consumption.

### **c. Class C items:**

70% of the items have only 10% of the annual inventory consumption.

## Method # 2. V.E.D. Analysis:

This classification is applicable only for spare parts and is based on criticality. In general, criticality of a spare part can be determined from the production downtime loss, due to spare being not available when required. The VED analysis is done to determine the criticality of an item and its effect on production and other services

### a. Vital (V):

A spare part will be termed vital, if on account of its non-availability there will be very high loss due to production downtime and/or a very high cost will be involved if the part is procured on emergency basis.

### b. Essential (E):

A spare part will be considered essential if, due to its non availability, moderate loss is incurred.

### c. Desirable (D):

A spare part will be desirable if the production loss is not very significant due to its non-availability. Most of the parts will fall under this category. The VED analysis helps in focusing the attention of the management on vital items.

### **Method # 3. FSN Analysis:**

FSN classification is based on frequency of issues/use. F, S and N stand for fast moving, slow moving and non-moving items. This form of classification identifies the items frequently issued; less frequently issued for use and the items which are not issued for longer period, say, 2 years.

**For instance, the items can be classified as follows:**

**a. Fast Moving (F):**

Items that are frequently issued say more than once a month.

**b. Slow Moving (S):**

Items that are issued less than once a month.

**c. Non-Moving (N):**

Items that are not issued\used for more than 2 years.

### **Method # 4. SDE Analysis:**

This classification is carried out based on the lead time required to procure the items.

**The classification is as follows:**

**a. Scarce (S):**

Items which are imported and those items which require more than 6 months' lead time.

**b. Difficult (D):**

Items which require more than a fortnight but less than 6 months' lead time.

**c. Easily Available (E):**

Items which are easily available; mostly local items, i.e. less than a fortnights' lead time.

This classification helps in reducing the lead time required at least in case of vital items. Ultimately, this will reduce stock-out costs in case of stock-outs.



## Method # 5. HML Analysis:

The cost per item (per piece) is considered for this analysis. The items of inventory should be listed in the descending order of unit value and it is up to the management to fix limits for these categories. High cost items (H), Medium Cost items (M) and Low Cost item (L) help in bringing controls over consumption at the departmental level.

**This classification is as follows:**

**a. High Cost items (H):**

Items whose unit value is very high

**b. Medium Cost items (M):**

Items whose unit value is of medium value.

**c. Low Cost items (L):**

Items whose unit value is low.

This type of analysis helps in exercising control at the shop floor level i.e., at the use point.

## Method # 6. Just-In-Time Inventory System:

Just in Time (JIT) is a production and inventory control system in which materials are purchased and units are produced only as needed to meet actual customer demand. In just in time manufacturing system inventories are reduced to the minimum and in some cases are zero.

JIT is a philosophy of continuous improvement in which non-value-adding activities (or wastes) are identified and removed for the purposes of reducing cost, improving quality, improving performance, improving delivery and adding flexibility.

JIT originated in Japan. Its introduction as a recognized technique/philosophy/ way of working is generally associated with the Toyota motor company, JIT being initially known as the **“Toyota Production System”**.

In today’s competitive world shorter product life cycles, customers rapid demands and quickly changing business environment is putting lot of pressures on manufacturers for quicker response and shorter cycle times. This can only be done by Just in Time (JIT) philosophy.

Under ideal conditions a company operating at JIT manufacturing system would purchase only enough materials each day to meet that day’s needs. Moreover, the company would have no goods still in process at the end of the day, and all goods completed during the day would have been shipped immediately to customers. As this sequence suggests, **“just-in-time”** means that raw materials are received just in time to go into production, manufacturing parts are completed just in time to be assembled into products, and products are completed just in time to be shipped to customers.

JIT applies primarily to repetitive manufacturing processes in which the same products and components are produced over and over again. In JIT workers are multifunctional and are required to perform different tasks. The just-in-time inventory system focus is having the right material, at the right time, at the right place, and in the exact amount.



## Advantages of JIT:

### The main benefits of JIT system are:

- a. Funds that were tied up in inventories can be used elsewhere.
- b. Areas previously used, to store inventories can be used for other more productive uses.
- c. The flows of goods from warehouse to shelves are improved.
- d. Employees who possess multiple skills are utilized more efficiently.
- e. Better consistency of scheduling and consistency of employee work hours.
- f. Increased emphasis on supplier's relationship.
- g. Setup times are significantly reduced in the factory.
- h. Defect rates are reduced, resulting in less waste and greater customer satisfaction.



