

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

In the name of Allah, Most Gracious, Most Merciful.

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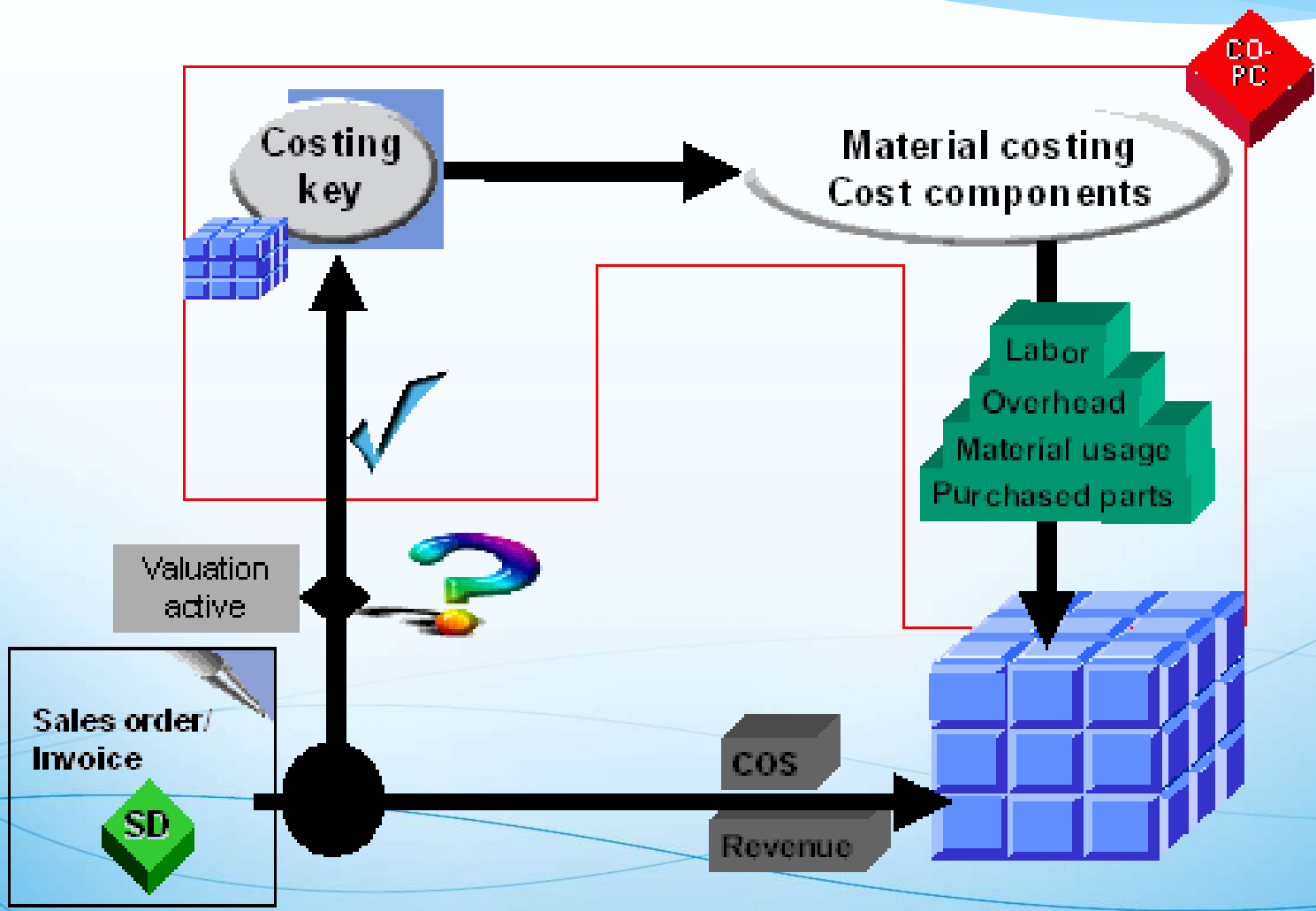
In the name of Allah, Most Gracious, Most Merciful.





# Material Costing and control





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**IF LIFE IS A GAME.**

**THEN I AM IN IT.... TO WIN IT.**

# Material

- The substance or substances out of which a thing is or can be made.
- Something, such as an idea or information, that is to be refined and made or incorporated into a finished effort.

# Material Cost



- The cost of the raw materials that go into a product.
- Material cost of a product excludes any indirect costs, for example, overhead or wages, associated with producing the item.

# Material Control

- Material control is a systematic control over the purchasing storing and using of material to minimizing the possible cost.
- Material control may be defined as the level of material maintenance so as to ensure uninterrupted production and minimizing the investment of funds.



# Types Of Material

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graph TD; A[Types Of Material] --> B[Direct Material]; A --> C[Indirect Material];
```

## Direct Material

The material whose cost can easily be identified to a particular unit of product is called direct material. Such as all raw material and all purchased parts of that product.

## Indirect Material

The material whose cost can not be easily identified to a unit of product is called indirect cost. This is not the part of finished product but is necessary to manufacture it.



# Purchasing department

- Purchase of all materials.
- Headed by General Purchasing Agent.

# Functions of Purchasing Department

- Receive purchase requisition for materials, supplies and equipment.
- Keep informed concerning sources of supply, prices, shipping and delivery schedules.
- Prepare and place purchase orders.
- Arrange systematic reports between the purchasing, receiving and accounting department.
- Verify and approve for payments all invoices received.

# Purchase Requisition

- Purchase Requisition is document generated by a internal organization or by store to notify the purchasing department of items required, their quantity and the time frame.
- Also called purchase request or requisition.
- It is an internal document and it is not used outside the enterprise.

# Purchase Order

- Signed by purchasing agent.
- Written authorization to vendor to supply specified quantities of described goods.
- Carries all necessary information regarding price, discount agreement, delivery stipulations and number of account to which order is to be charged.

# Receiving Department

A department of company which deals with incoming goods and payments is called receiving department.

# Functions of Receiving Department

- Unload and unpack incoming materials.
- Check quantities received against the shipper's packing list.
- Identify goods received with description on the purchase order.
- Prepare receiving report.

# Functions of Receiving Department

- Notify the Purchasing Department for discrepancies discovered.
- Arrange for inspection when necessary.
- Notify the Traffic Department and Purchasing department of any damage in transit.
- If the materials require any quality control or inspection, they are sent for such testing.

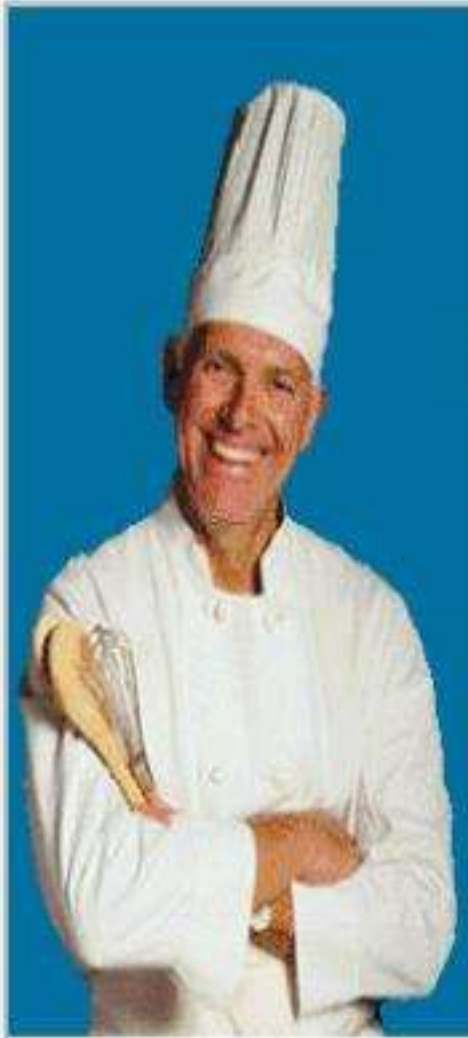


# Receiving Report

- Shows the purchase order number.
- Shows the account number to be charged.
- Name of vendor.
- Details relating to transportation.
- Quantity and type of goods received.

# Material Requisition

- Written order to store keeper to deliver material or supplies to the Manufacturing Department or where it is needed.
- It is issued by the Manufacturing Department to the Store.



take  
**control**  
with  
**Q** OPTIMUM  
CONTROL

# Methods of Material Costing

- 1) First In First Out (FIFO) Method.
- 2) Last In First Out (LIFO) Method.
- 3) Average Costing Method.

# First In First Out Method

- It is an inventory costing method which assumes that the first items placed in inventory are the first consumed.
- Inventory at the end of a year consists of the goods most recently placed in inventory.

# Advantages of FIFO Method

- It is simple to understand and easy to operate.
- Material cost charged to production represents actual cost.
- In the case of falling prices, the use of this method gives better results.
- Closing stock of material will be represented very closely at current market price.
- It is a logical method because materials are issued in order of purchases, so materials received first are utilized first.
- This method is useful when transactions are not too many and prices of materials are fairly steady.



# Disadvantages of FIFO Method

- If the prices fluctuate frequently, this method may lead to clerical error.
- In case of fluctuations in prices of materials, comparison between one job and the other job becomes difficult.
- For pricing rise, the issue price does not reflect the market price as materials are issued from the earliest consignments.



# Practice Question.

ABC Co. has following data available

01-06-2011	Inventory	800 units @ Rs.6/unit.
05-06-2011	Purchased	200 units @ Rs.7/unit.
08-06-2011	Purchased	200 units @ Rs.8/unit
10-06-2011	Issued	700 units to work in Process
11-06-2011	Issued	300 units to work in Process

# First In First Out Method

## ABC Corporation. Material Costing ledger

Date	Description	Quantity	Amount	Balance	
				Units	Amount
01 June	Opening balance	800@6/unit	4800	800	4800
05 June	Purchases	200@7/unit	1400	1000	6200
08 June	Purchases	200@8/unit	1600	1200	7800
10 June	Issued	700@6/unit	4200	500	3600
11 June	Issued	100@6/unit 200@7/unit	2000	200	1600

# Last In First Out Method

- LIFO is an inventory costing method which assumes that the last items placed in inventory are first consumed during an accounting year.
- Inventory at the end of a year consists of the goods placed in inventory at the beginning of the year.

# Advantages Of LIFO Method

- The cost of materials issued will be nearer to the current market price.
- It enables us to match cost of production with current sales revenues.
- The use of the method during the period of rising prices does not reflect undue high profit in the income statement.
- In the case of falling prices profit tends to rise due to lower material cost.
- In the period of inflation LIFO will tend to show the correct profit and thus avoid paying undue taxes to some extent.

# Disadvantages of LIFO Method

- Calculation under LIFO system becomes complicated when frequent purchases are made at highly fluctuating rates.
- Costs of different similar batches of production carried on at the same time may differ.
- This method of valuation of material is not acceptable to the income tax authorities.
- The stock in hand is valued at price which does not reflect current market price.
- Closing stock will be understated or overstated in the Balance Sheet.

# Practice Question.

ABC Co. has following data available

01-06-2011	Purchased	100 units @Rs.5/unit
05-06-2011	Purchased	500 units @Rs.8/unit.
06-06-2011	Issued	200 units to work in Process
07-06-2011	Purchased	100 units @Rs.10/unit
08-06-2011	Issued	300 units to work in Process



# Last In First Out Method

## ABC Corporation. Material Costing ledger

Date	Description	Quantity	Amount(Rs.)	Balance	
				Units	Amount(Rs.)
01-June	Purchases	100@Rs5/unit	500	100	500
05-June	Purchases	500@Rs8/unit	4000	600	4500
06-June	Issued	200@Rs8/unit	1600	400	2900
07-June	Purchases	100@Rs10/unit	1000	500	3900
08-June	Issued	100@Rs10/unit			
		200@Rs8/unit	2600	200	1300



# Weighted Average Method

Inventory costing method in which material is issued at average cost is called weighted average method.

# Practice Question.

ABC Co. has following data available

01-06-2011	Purchased	100 units @Rs.5/unit
05-06-2011	Purchased	500 units @Rs.8/unit.
06-06-2011	Issued	200 units to work in Process
07-06-2011	Purchased	100 units @Rs.10/unit
08-06-2011	Issued	300 units to work in Process

# Weighted Average Method

ABC Corporation.

Material Costing ledger

Date	Description	Quantity	Amount(Rs.)	Balance	
				Units	Amount(Rs.)
01-June	Purchases	100@Rs5/unit	500	100	500
05-June	Purchases	500@Rs8/unit	4000	600	4500
06-June	Issued	200@Rs7.5/unit	1500	400	3000
07-June	Purchases	100@Rs10/unit	1000	500	4000
08-June	Issued	300@Rs8/unit	2400	200	1600



# Material Control



# Functions Of Store Department

- Receiving and checking all materials
- Storing all materials and supplies
- Issuing materials and supplies for use and sale
- Keeping complete records of material
- Verifying the accuracy of the book inventory

# Determining And Minimizing Cost

- \*Ordering point**
- \*Minimum Limit**
- \*Maximum Limit**
- \*Danger Level**



# Ordering Point

## \* Definition:

The inventory level at which an order is placed for additional stock.

# Ordering Point

**Formula:**

**Maximum Daily Requirement**

**×**

**Time Required for receipt of  
material**

# Minimum Limit

## **Definition:**

Is a limit where we have low quantity of material and must order for caring the production if material decreases from this point this may interrupt production

# Minimum Limit

**Formula:**

**Ordering Point – Average Daily  
Requirement**

**×**

**Time Required For Receipt Of Material**

# Maximum Limit

## **Definition:**

Is a level of limit where we have a high quantity of material and don't need to order for placing addition material

# Maximum Limit

**Formula:**

**Ordering Point – Minimum Daily  
Requirement**

**+**

**Economic Order Quantity**

# Danger Level

**Definition:**



# Danger Level

## Formula:

**Average Daily Requirement**

×

**Time Required To Secure  
Emergency Supply**

## Question:

Here we have maximum daily requirement is 100 units and time required for receipt of material is 15 days and Economic Order Quantity is also given 2000 units. So what would be the Ordering point ???

Answer:

1500

## Question:

Here we have average daily consumption is 20 units and the time required to secure emergency supplies is 8 days and minimum daily requirement is also given 50 units. So what would be a Danger Level???

Answer:

160 units

# Question for implementation of these concept

- \* Average Daily Requirements 30units
- \* Time required for receipt of payment 20days
- \* Maximum Daily Requirement 50units
- \* Minimum Daily Requirement 10units
- \* Economic Order Quantity 2000units
- \* Period Required to secure Emergency supplies 5days

# Requirement For The Question

## Requirement are :

- 1) Ordering Point ???
- 2) Minimum Point ???
- 3) Maximum Point ???
- 4) Danger Level ???



# Ordering Point

## Formula:

Maximum Daily Requirement

×

Time Required For Receipt Of Material

$$50 \times 20 = 1000$$

**Ordering point is 1000**

# Minimum Point

## Formula:

Ordering Point – Average Daily Requirement

×

Time Required for Receipt Of Material

$1000 - (30 \times 20) = 400$  Units

**Minimum Point Is 400 Units**

# Maximum Point

## Formula:

Ordering Point – Minimum daily Requirement

+

Economic Order Quantity

$$1000 - 200 + 2000 = 2800$$

**Maximum Point is 2800**

# Danger Level

## Formula:

Average Daily Requirement

×

Time Required to Secure  
Emergency Supplies

$$30 \times 5 = 150$$

**Danger level is 150**