

Ch-8 Stores Management

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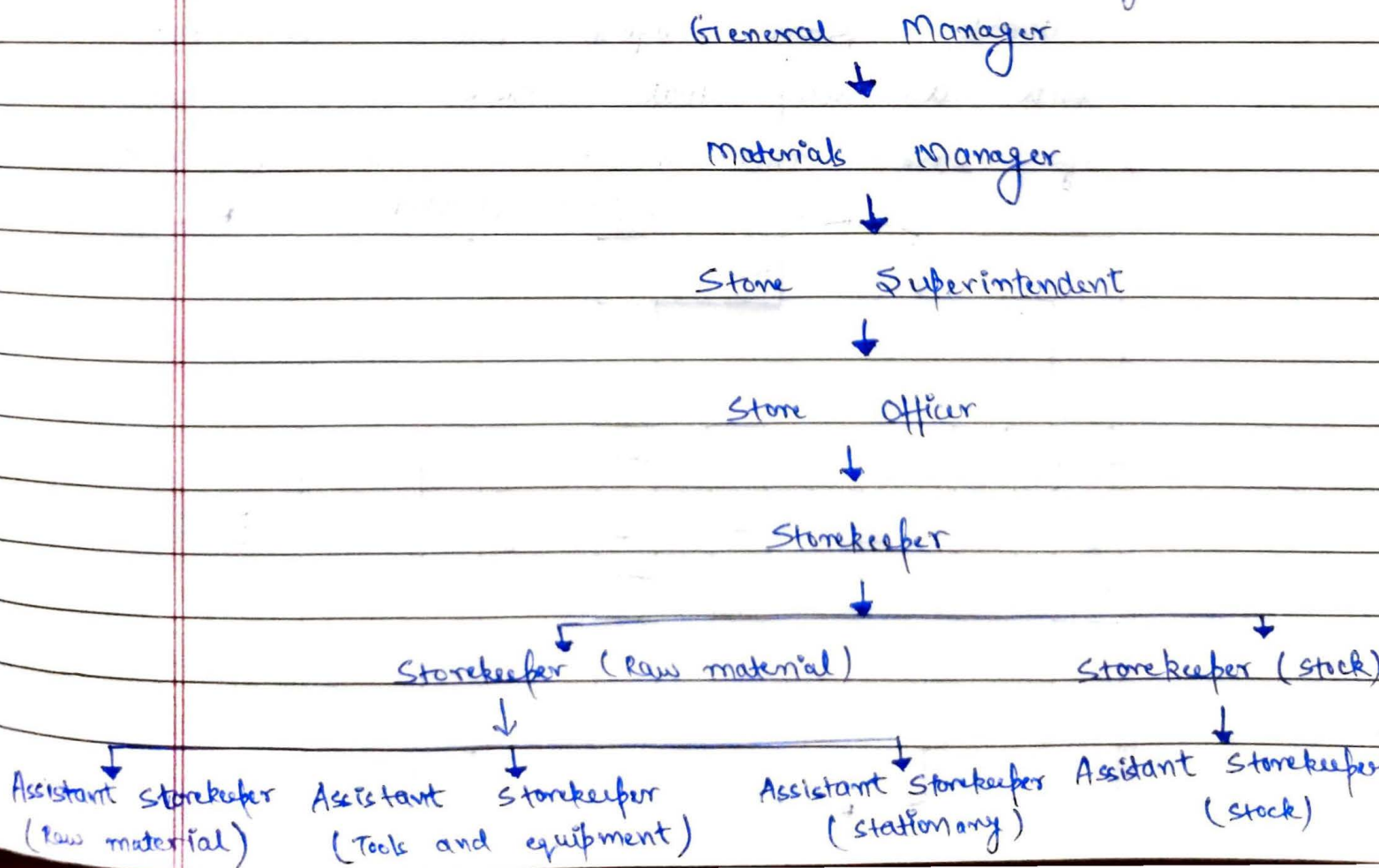
8.1 Store

Raw material or unworked material lying in an industry is known as store. The place where this material is kept is known as store room.

→ Storekeeping may be defined as the function of receiving, storing and issuing the raw material.

8.3 Structure of stores

The structure of store is as always :

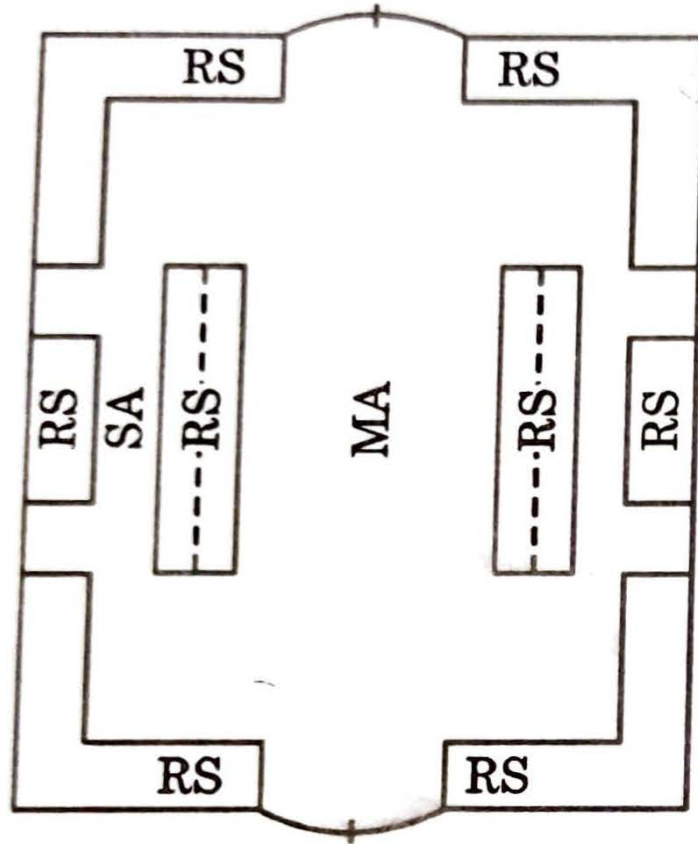


Storekeeper is the main ~~reason~~ person in the store room. He is fully responsible for all the items under his charge. He should maintain the store in such a way that the chances of theft and wastage of materials are minimum.

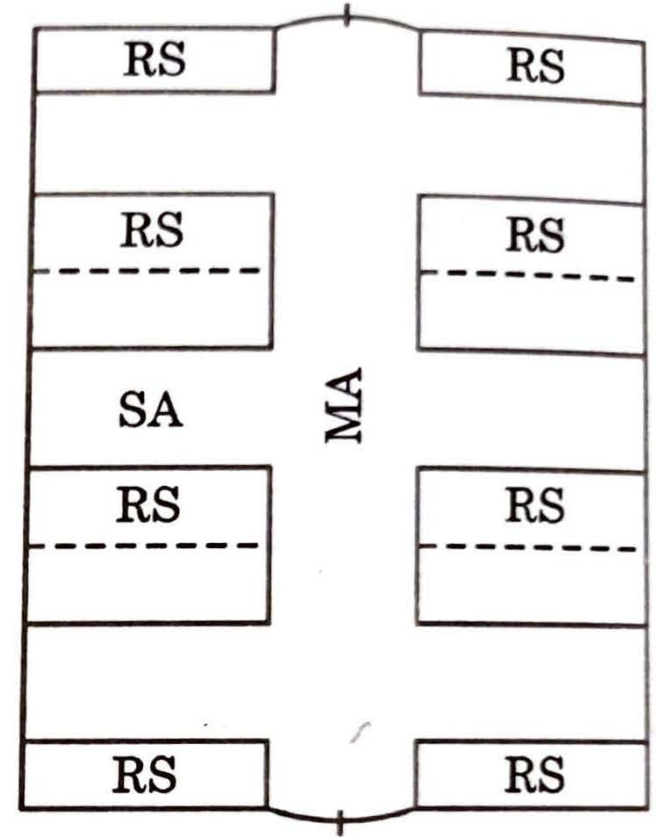
8.4 Layout of stores

A good store layout is that which brings the point of origin, store room and point of use in proper sequence for best flow of materials. Store layout should be planned in such a way that there is minimum wastage of store and maximum ease of operation.

✓ Figs 8.1 (a) and (b) show a poor and good store layout.



✓ (a) Poor



✓ (b) Good

MA-Main aisle, SA-Side aisle,
RS-Racks, shelves, platformd etc.

Fig. 8.1: Store Layout

8.5Inventory

Inventory is the physical stock of those movable items which are necessary for manufacturing a product and for maintaining equipments and machines in good working order. Inventory is actually the money kept in the store room.

8.7Inventory control

Inventory control may be defined as the scientific method of finding out how much stock should be maintained in order to meet the production demand and be able to provide right type of material at right time in right quantities and at competitive prices. Basically, a good inventory control leads to reduction in material cost and production cost.

8.8Advantages of Inventory control

- ① Quality material is purchased at proper time
- ② Shortage of material does not occur.
- ③ There is NO delay of production due to non-availability of materials.

8.10

Economic Order Quantity

Fig 8.2 shows the graph of inventory ordering cost and inventory carrying cost with respect to quantity in a lot. The total cost is calculated by adding ordering cost and carrying cost. The total cost is minimum at point A and thus A' represents the economic order quantity (E.O.Q.) or economic lot size. Thus economic order quantity (E.O.Q.) is the lot size that minimizes the total inventory ordering and carrying costs.

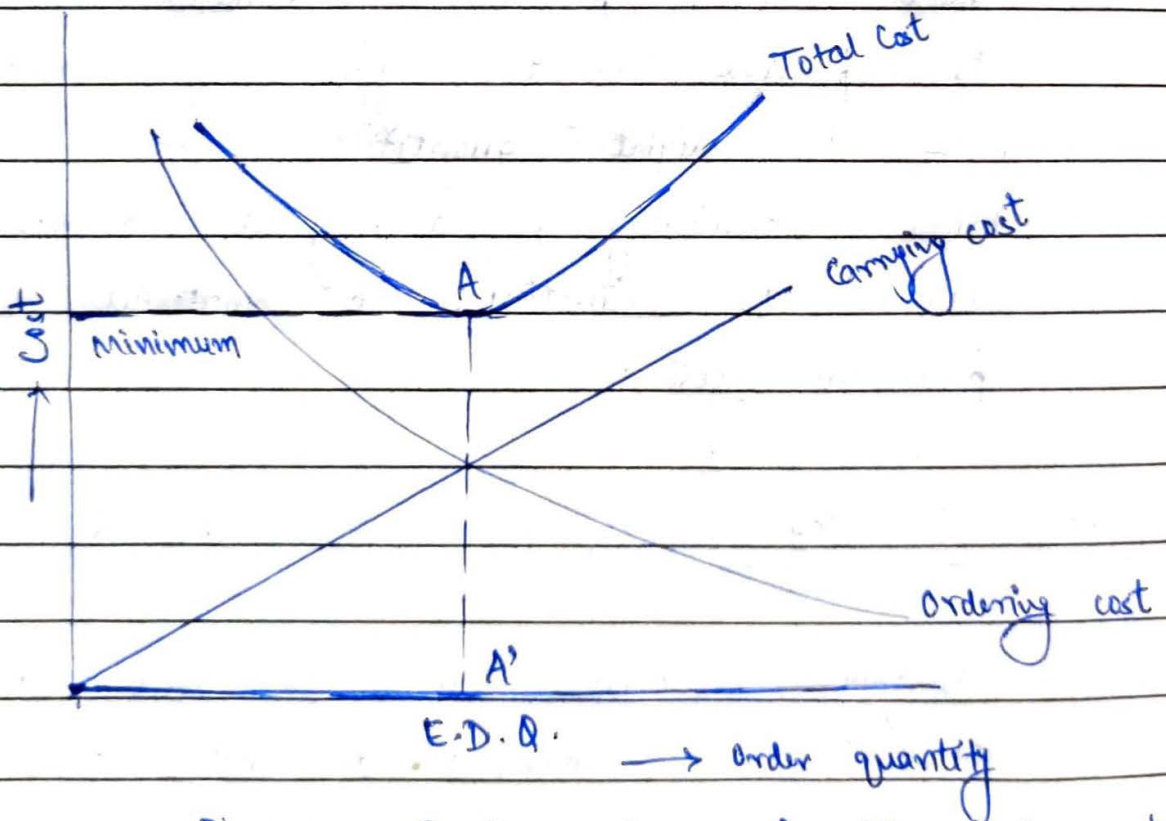


Fig 8.2 : Graph between Quantity and cost

Another method of finding the economic order quantity (E.O.Q.) is by mathematical means as follow :

Let Q = Economic order quantity (E.O.Q.)
 O = Inventory ordering cost associated with one order

C = Cost for one item

I = Inventory carrying cost in percentage per period

U = Total quantity used per period ~~per~~ say annually.

Number of purchase orders to be furnished

$$= \frac{\text{Total quantity}}{E.O.Q.}$$

$$= \frac{U}{Q}$$

Inventory ordering cost = Number of purchase orders $\times$ Inventory ordering cost per order

$$= \frac{U}{Q} \times O$$

$$\text{Average annual inventory} = \frac{Q}{2}$$

$$\begin{aligned} \text{Inventory carrying cost} &= \text{Average inventory} \\ &\quad \times \text{Cost per item} \\ &\quad \times \text{Inventory ordering cost in} \\ &\quad \text{percentage per period} \\ &= \frac{Q}{2} \times C \times I \end{aligned}$$

$$\begin{aligned} \text{Total cost, } T &= \frac{U \times O}{Q} + \frac{Q}{2} \times C \times I \\ &= UO \cdot Q^{-1} + \frac{Q}{2} CI \end{aligned}$$

To minimize total cost, differentiate T w.r.t. Q and put it equal to zero,

$$\frac{dT}{dQ} = -UO \cdot Q^{-2} + \frac{CI}{2} = 0$$

$$\Rightarrow \frac{UO}{Q^2} = \frac{CI}{2}$$

$$\Rightarrow Q^2 = \frac{2UO}{CI}$$

$$\Rightarrow Q = \sqrt{\frac{2UO}{CI}}$$

Bin card :- Bin card is a card attached to each bin or rack where material is placed. It shows complete record of

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materials entering and leaving each bin
or rack.

BIN CARD

Bin No.

Material

Code No.

Store ledger Folio No.

Maximum Quantity

Ordering Level

Minimum Quantity

Date	Quantity Received	Quantity Issued	Balance	Remarks

.....

(Signature of Checking Authority)

.....

(Signature of Storekeeper)

Fig. 8.3: Bin Card

8.12

Purchase Procedure

Purchase procedure consists of the followings :

- ① Initiating the purchase
- ② Receiving the purchase requisitions
- ③ Deciding important factors relating to purchase.
- ④ Selecting the suppliers.
- ⑤ Placing purchase orders.
- ⑥ Receiving ~~the~~ and inspecting the materials.
- ⑦ Passing invoices for payment.

1. Initiating the purchase :- The following persons can initiate the purchase :

- ① Storekeeper to make up his stocks.
- ② Production planner to acquire materials to manufacture a new product.
- ③ Head of Department to acquire such materials which do not form part of store list.

2. Purchase Requisitions :- Purchase requisitions are made by the personnel from all the functional areas of the firm. It includes all the informations such as

① How many items are needed.

② When items are needed.

③ Who is making the request?

In purchase requisition, 'quantity in hand' is also included so that it can be found out whether items are really needed or not.

3. Deciding Important factors relating to purchase:
After purchase requisition, the following important factors are to be decided:

① What to purchase?

② When to purchase?

③ How much to purchase?

4. Selecting the Suppliers: Selecting capable suppliers is one of the most important responsibilities of the purchase manager. If the right supplier is selected, then competitive pricing, reliable quality, on time delivery,

good technical service and other goals of material purchasing are most likely to be achieved. A supplier must be motivated, assisted and periodically evaluated.

5. Placing Purchase orders : Under this, a written authorization is given to the supplier to supply a specified quality and quantity of materials according to the terms and conditions. A purchase order has a legal value as it binds both purchaser and supplier. It is also essential to follow up the purchase order so that the supply is in time. This function will help the production work to continue without any delay. If after remainder, the supplier doesnot respond, then the order should be cancelled and the other firm next on the tender statement should be informed.

6. Receiving and inspecting the materials : After placing the order, it is the prime duty of the receiving department to conduct a physical

verification of the contents. In small business, receipt and inspection are carried out by the same person and he is the storekeeper, but in large organisations, the functions are performed by separate departments. The basic duties of the receiving department are as follow:

- ① To unpack and mark the goods received.
- ② To check the quality and quantity of the goods received.
- ③ To prepare a statement of goods received.

After this, a report is prepared ~~with~~ which highlights the goods received which do not confirm to the specifications contained in the purchase order and liable to be rejected. This report is prepared in triplicate. one copy is sent to supplier, second to the store and third to the inspection department.

7. Passing Invoice for Payment : Generally, the supplier sends an invoice in respect of materials required. It contains details regarding material supplied and the amount to be paid for it. On receipt of invoice, the purchase department checks and compares the details.

with the purchase order, materials received note, inspection report and materials debit note and sees that

- ① Materials received ~~were~~ actually ordered.
- ② Materials received confirm with the quality and quantity ordered.
- ③ There is NO arithmetical error.

Having checked all the items, the bill is passed and sent to accounts department which makes the payment by accepting a stamped receipt.

