

Unsolved Ques. No. 2 from book Maheshwari & Mittal (Page No. 117)

Solution :

$$(A) \text{ Minimum Stock level of A} = \text{Re-order level} - (\text{Average rate of consumption} * \text{Average re-order period})$$

$$\Rightarrow \text{Re-order level (Given)} = 8000$$

$$\Rightarrow \text{Average rate of consumption} = \text{Average weekly production} * \text{Usage per unit of product}$$

$$= 200 * 10$$

$$= 2000$$

$$\Rightarrow \text{Average re-order period} = \frac{\text{Min. re-order period} + \text{Max. re-order period}}{2}$$

$$= \frac{1 + 3}{2}$$

$$= 2$$

$$\text{Min. Stock level of A} = 8000 - (2000 * 2) \\ = 4000 \text{ Ibs.}$$

$$(b) \text{ Maximum Stock level of B} = \text{Re-order level} + \text{Re-order Quantity} - (\text{Min. consumption} * \text{Min. re-order period})$$

$$\Rightarrow \text{Re-order level (given)} = 4750$$

$$\Rightarrow \text{Re-order quantity (given)} = 5000$$

$$\begin{aligned}\Rightarrow \text{Min. Consumption} &= \text{Min. weekly production} * \text{usage per unit of product} \\ &= 175 * 4 \\ &= 700\end{aligned}$$

$$\Rightarrow \text{Min. re-order period (given)} = 3$$

$$\begin{aligned}\text{Max. Stock level of B} &= 4750 + 5000 - (700 * 3) \\ &= 7650 \text{ lbs.}\end{aligned}$$

$$(C) \text{ Re-order level of C} = \text{Max. re-order period} * \text{Max. Usage}$$

$$\Rightarrow \text{Max. re-order period (given)} = 4$$

$$\begin{aligned}\Rightarrow \text{Max. Usage} &= \text{Max. weekly production} * \text{usage per unit of product} \\ &= 225 * 6 \\ &= 1350\end{aligned}$$

$$\begin{aligned}\text{Re-order level of C} &= 4 * 1350 \\ &= 5400 \text{ lbs.}\end{aligned}$$

$$(d) \text{ Average Stock level of A} = \text{Min. Stock level} + \frac{\text{EOQ}}{2}$$

(Ist method)

$$\Rightarrow \text{Min. Stock level (as calculated in point a)} = 4000$$

$$\Rightarrow \text{EOQ (given)} = 10,000$$

$$\begin{aligned} \text{Average Stock level of A} &= 4000 + \frac{10,000}{2} \\ &= 9000 \text{ Ibs.} \end{aligned}$$

$$\text{Average Stock level of A} = \frac{\text{Min. Stock level} + \text{Max. Stock level}}{2}$$

(IInd method)

$$\Rightarrow \text{Min. Stock level (as calculated in point a)} = 4000$$

$$\begin{aligned} \Rightarrow \text{Max. Stock level} &= \text{Re-order level} + \text{Re-order quantity} - \\ &\quad (\text{Min. consumption} * \text{Min. re-order period}) \\ &= 8000 + 10,000 - [(175 * 10) * 1] \\ &= 16250 \end{aligned}$$

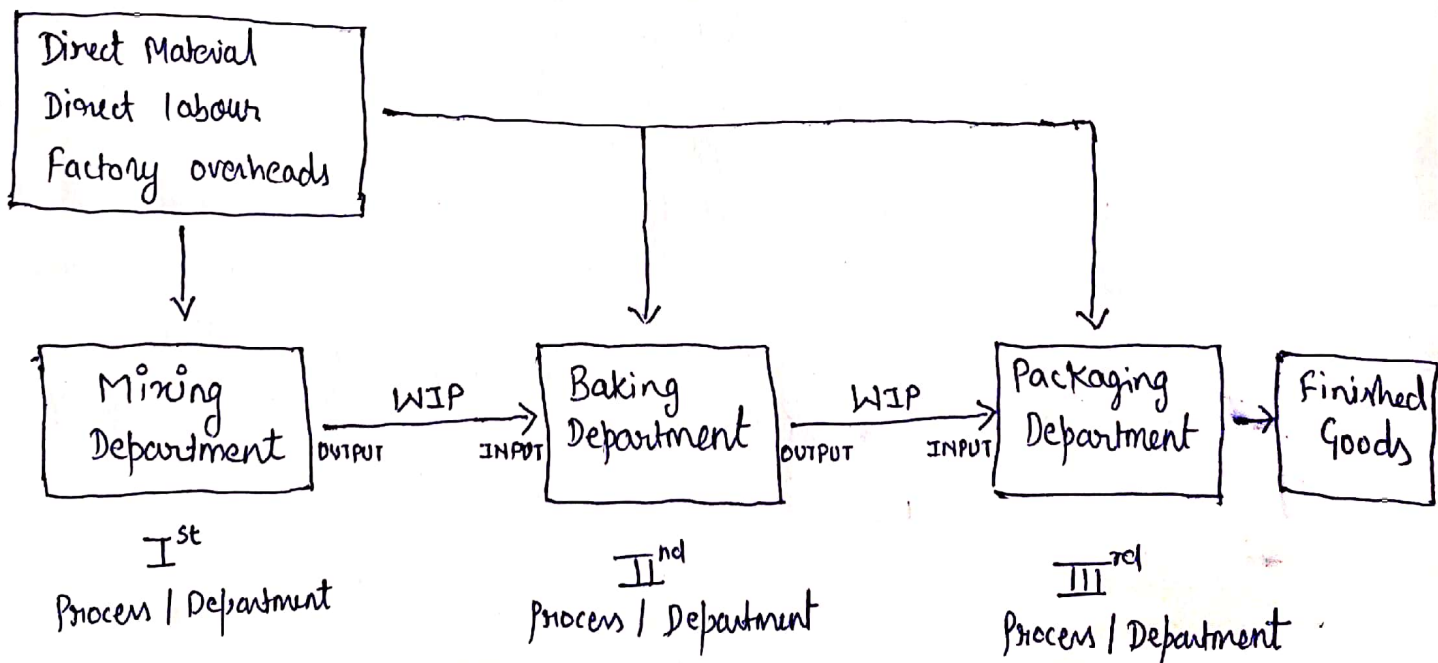
$$\begin{aligned} \text{Average Stock level of A} &= \frac{4000 + 16250}{2} \\ &= 10125 \text{ Ibs.} \end{aligned}$$

CHAPTER 9
PROCESS COSTING

⇒ Raw materials move down the production line through a number of processes in a particular sequence and costs are compiled for each process or department by preparing a separate account for each process. This process-wise cost identification method is known as process costing.

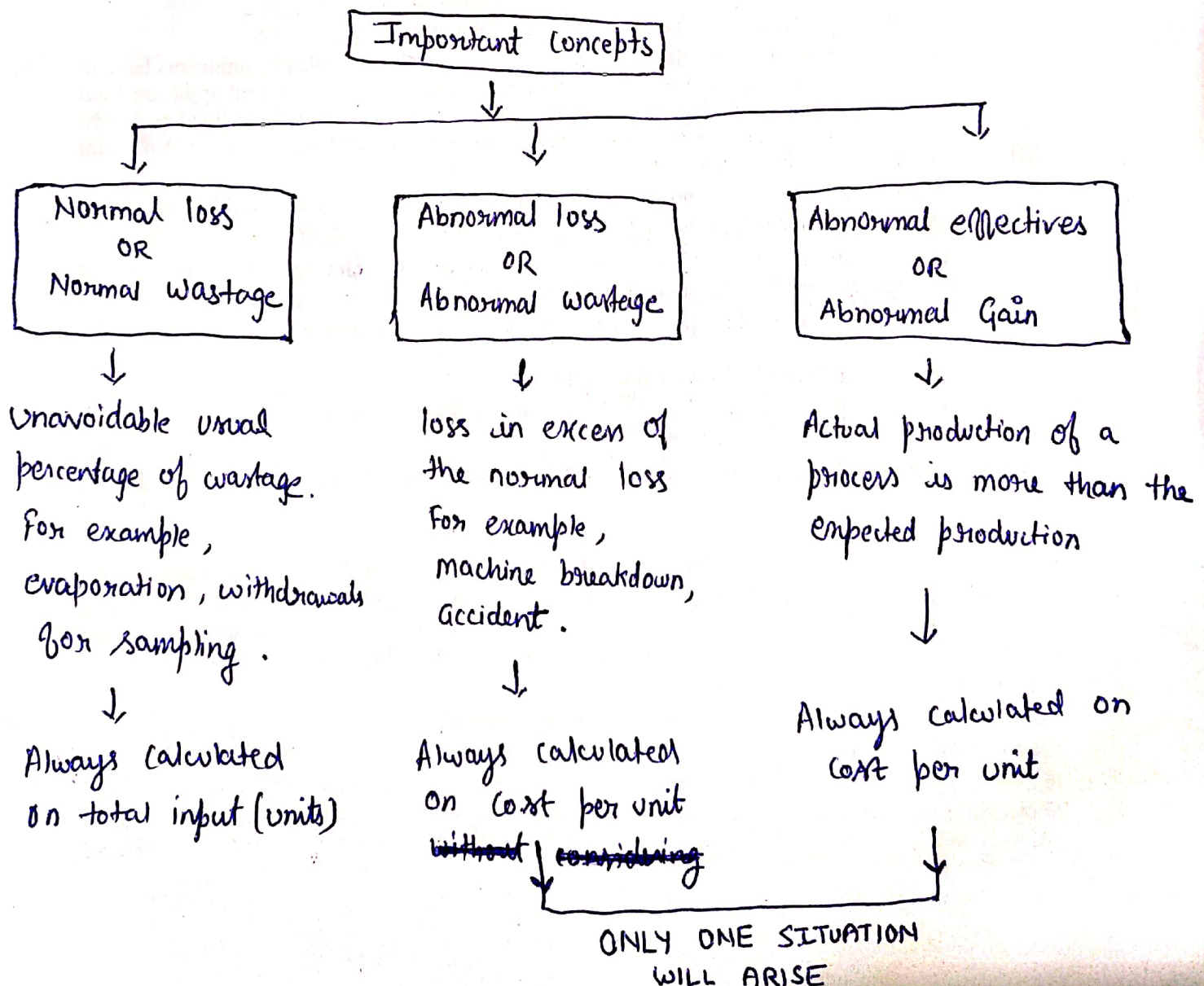
Process costing is used in mass production industries producing standard products, like steel, sugar and chemicals etc.

Understand the concept of process costing through an example of flow of costs in making cookies :



⇒ Identification of costs by mixing department, baking department and packaging department separately during their processes are called process costing.

⇒ The output of mixing department becomes the input for baking department and output of baking department becomes input for packaging department. This process continues till we reach the finished products.



FORMAT OF PROCESS ACCOUNT

Particulars	Units	Amount	Particulars	Units	Amount
To Direct Material	xxx	xxx	By Normal loss/wastage	xxx	xxx
To Direct labour	xxx	xxx	By Abnormal loss/wastage	xxx	xxx
To Direct Expenses	xxx	xxx	By Output transferred to next process	xxx	xxx
To Factory Overheads	xxx	xxx			
To Abnormal Gain/Effectives	xxx	xxx			
	xxx	xxx		xxx	xxx

⇒ Steps to complete process account.

- ① write down all costs incurred in a particular process on the debit side of a process account till factory overheads.
- ② write down the units of normal loss on the credit side of a process account and its value.
- ③ write down the units of output on the credit side of a process account.
- ④ (a) If [total units of Direct material - units of Normal loss] is greater than units of output, then abnormal loss will occur.

$$\text{Abnormal loss (units)} = \text{Total units of Direct material} - \text{Normal loss (units)} - \text{output (units)}$$

(b) If [total units of Direct material - units of normal loss] is less than units of output, then ~~normal~~ abnormal gain/effectives will occur.

$$\text{Abnormal Gain (units)} = \text{Total units of Direct material} - \text{Normal loss (units)} - \text{output (units)}$$

(5) Calculate cost per unit from the following formula:

$$= \frac{\text{Total expenses incurred} - \text{Scrap from normal loss / value of normal loss}}{\text{Total units of material introduced} - \text{units of normal loss}}$$

(6) Value of Abnormal loss or Abnormal gain (whichever is the case) will be calculated as per cost per unit (calculated in point no. 5 above)

(7) value of output transferred to next process will also be calculated on cost per unit (as in point no. 5).

NOTE :- Output of last process A/c will be transferred to Finished Goods Stock A/c

		PROCESS A/c			
To input from previous process.	xxx	xxx	By Finished Goods Stock A/c	xxx	xxx