

UNIT-II
ELEMENTS OF COST: MATERIAL AND LABOUR

1. What is material Control? State the objectives of material control.

Ans. Material control can be defined as a systematic control over purchasing, storing and consumption of material, so as to maintain regular and timely supply of materials at the same time availing the right quantity of material of right quality at the right time and place at the minimum cost.

Objective of Material control:

- (i) To make available all type of materials and stores of right quality without any intervention.
- (ii) To make purchase of materials of required quality according to the standard fixed for finished product.
- (iii) To make purchases of materials at reasonable low cost or at maximum economy.
- (iv) To avoid wastages and losses during storage and usage.
- (v) To avoid the situation of under stocking i.e., to provide continuous supply of required material so that the activities of production may not be held up.
- (vi) To avoid the over stocking i.e. to maintain optimum investment in inventory.
- (vii) To maintain proper and up to date records of inventory.
- (viii) To provide required information to the management, so as to help the management in taking inventory decision.

2. Briefly explain the essential requirement of material control. Name the aspects as material control.

Ans. Following are the essential requirement of material control:

(i) Proper coordination: There should be proper coordination of all departments involved viz. Purchasing, Receiving, Inspection, Storage, Production, Cost and Finance.

(ii) Proper purchase system: There should be proper purchase system to ensure the procurement of material and stores of the required quality at minimum cost from a reliable source.

(iii) Proper storage system: There should be proper storage system to ensure a place for everything in its place & avoidance of losses during storage and minimum storage cost.

(iv) Proper Issue system: There should be proper system for the issue of material to ensure the delivery of material of the required quality in the required quantity at the required time upon the requisition to the department making requisition.

(v) Perpetual Inventory system: There should be perpetual inventory system so as to determine the quantity and value of each item of material in stock at any point of time.

(vi) Continuous stock taking system: There should be continuous stock taking system so as to ensure accuracy of perpetual inventory records.

(vii) Internal check system: There should be internal check system so that all transaction concerning materials are automatically checked.

(viii) Proper budgetary control system: There should be proper budgetary control system to ensure economy in purchasing and usage of materials and stores.

Aspects of material control:

There are two aspects of material control:

(i) Accounting Aspects and (ii) Operational aspects.

3. Name the different techniques of material control.

Ans. The different techniques of material control are:

- | | |
|--------------------------------------|------------------------------------|
| (i) Level Setting. | (ii) Economic Order Quantity. |
| (iii) Just-in-Time Inventory System. | (iv) ABC Analysis. |
| (v) VED Analysis. | (vi) Perpetual Inventory System. |
| (viii) Double Bin System. | (ix) Material Turnover Ratio. Etc. |

4. Explain the following items relating to materials and state on what basis they are fixed.

(a) Minimum stock level. (b) Maximum stock level. (c) Reorder level. (d) EOQ and (e) Danger level.

Ans.(a) Minimum Stock level : It is the stock level below which stock of material never of fall. If the stock goes below this level there is every possibility that the production held for want of material.

Minimum stock level = Reorder level (normal consumption x normal reorder period).

The minimum level is determined after considering the following factor:

- (i) Reorder level.
- (ii) Normal rate of consumption.
- (iii) Normal reorder period.

(b) Maximum stock level: It is the stock level above which stock should not be allowed to rise. This is the maximum quantity of stock of raw materials which can be had in the stock. If it goes above, it will be over stocking.

Maximum level = Reorder level + reorder quantity (minimum consumption x minimum reorder period).

The maximum level is fixed after considering the following factors.

- (i) Reorder level.
- (ii) Reorder quantity.
- (iii) Minimum rate of consumption.
- (iv) Maximum reorder period.
- (v) Availability of working capital etc.

(c) Reorder level: It is the point at which fresh order should be placed replenishment of stock. It is fixed between the maximum level and minimum level.

Reorder level = Maximum consumption x maximum reorder period.

This level is fixed after considering the following factors.

- (i) Maximum rate of consumption.

(ii) Maximum reorder period.

(d) Economic ordering quantity (EOQ): It is the quantity of inventory which can be reasonably ordered at a time and purchased economically. It is also known as standard order quantity, optimum quantity or economy lot size. The EOQ is fixed in such a manner to minimize the cost of ordering and carrying the stock i.e. ordering cost and inventory carrying cost.

$$EOQ = \sqrt{\frac{2CO}{I}}$$

Where, C = Annual consumption.

O = ordering cost per order.

I = Carrying cost per unit per year.

The following are considered for EOQ.

- (i) Cost of placing an order.
- (ii) Cost of Transportation.
- (iii) Cost of receiving good.
- (iv) Cost of storage etc.

(e) Danger level: Danger level is the level at which normal issues of the material inventory are stopped and emergency issues are only made on special requisition approved by the competent authority

Danger level = Average consumption x Maximum Reorder period for Emergency purchases.

This level is fixed after considering the following factors:

- (i) Normal rate of consumption.
- (ii) Maximum reorder period for emergency purchases.

5. Briefly explain the important method of pricing of material issues/ Methods of stock valuation.

Ans. Following are the important method of pricing of material issues are:

(i) First in First out (FIFO): Under this system, materials are issued in the order in which they are received in the store. The material receives first will be issued first i.e. first come first serve.

(ii) Last in first out (LIFO): This method is Opposite to FIFO; here Materials received last are issued first. Issues are made from the latest purchases.

(iii) Specific price method: This is the price actually paid for the materials for a particular job or work or contract. Under this method, materials purchased for specific job or kept separately and when issued to job is charged to actual price paid.

(iv) Based stock Method: In almost all concern a minimum quantity of stock always kept in store. A fixed minimum stock of material is maintain and is known as safety or base. This stock is valued at a price at which the first lot of materials is received.

(v) Highest in first out (HIFO): Under this method, materials of the highest price are issued first. According to this method the closing stock is at the minimum price as low as possible.

(vi) Simple average method: Issued price of raw materials are fixed at the calculated average unit price.

(vii) Weighted average method: This method give weighted average from the price to the quantity also. Weighted average is a price obtained by dividing the total cost of material of the stock by the total quantity of material in the stock.

(viii) Standard price method: This is a method of valuing the price on a pre-determined price. The standard price of material is decided taking into account the quantity purchased, market condition, further trend of the price & all other material connected with the material.

5. Write a short note on following:

- | | |
|--------------------------------|------------------------------------|
| (a) ABC Analysis | (b) VED Analysis |
| (c) Perpetual Inventory system | (d) Just in Time Inventory system. |

Ans. (a) ABC Analysis: ABC Analysis is also known as a system of inventory control. Under this method (Always Better Control) efficient control of store is required to give more care on costlier item. As such on the basis of the value of different Materials item are grouped into 3 category:

- (i) High price materials (A)
- (ii) Medium Price Materials (B)
- (iii) Low price Materials (C)

The Materials , which are costly and form a small part of the total inventory can be grouped under (A) Greater degree of care should be taken in storing and in the use of such item marked (A). One the Other hand, certain materials do not required much investment and number of such item usually marked (C). The material which has moderate value will be marked (B).

Advantages:

- (i) It ensures effective control on costly item which required large investment.
- (ii) It save time & cost by exercising economic system of control over low value item (i.e. C category item).
- (iii) It ensures minimum total cost of inventory.
- (iv) It ensures optimum investment in inventory considering the operational requirement and financial resources with the use of EOQ.
- (v) It helps in the maintenance of high inventory turnover rate.

(B) VED Analysis: VED Analysis (Vital, Essential & Desirable) is used primarily for control of spare parts. The spare parts can be divided into 3 categories- Vital, Essential, or Desirable keeping in view the Criticality to production.

The spares, the stock out of which is even for a short time will stop production for quite some time and where the cost of stock out is very high are known as vital spares.

The spares, the absence of which cannot be tolerated for a more than a few hours on a day and the cost of lost production is high and which are essential for the production to continue are known as essential spares .

The desirable spare are those spares which are needed but the absence for even a week or so will not lead to stoppage of production.

(C) Just in time Inventory system: Just in time purchasing mean purchase when required only. Purchase immediately before use. The main objective of JIT purchase is to minimise the carrying cost, storage cost, material handling cost, obsolescence etc.

Advantages:

- (i) Investment in inventory is reduced because more frequent purchase orders of small quantity are made.
- (ii) Carrying cost is reduced as a result of low investment in inventory.
- (iii) Quality cost i.e. cost of inspection, scare, obsolescence is also reduced.
- (iv) In case of perishable, JIT supply is good / suitable.

(D) Perpetual Inventory system: Perpetual Inventory system is a system of recording store balances after receipt and issue, to facilitate regular checking and to avoid closing down for stock taking. The basic objective of P.I. system is to provide a continuous quantity cum value records of receive, issue and balance of each item of store followed continuous stock taking.

Advantages: (i) It facilitates the quick preparation of Interim A/c's due to prompt availability of stock balances from perpetual records.

(ii) It facilitates the early detection of stock deficiency or prompt action to prevent their resource in future.

(iii) It facilitates to avoid the situation of overstocking and under stocking.

(iv) It facilitates the system of internal check.

(v) It keeps the store staff always alerts because of the element of surprise percent therein.

6. What is bin card? Distinguish between store ledger & bin card.

Ans. Bin is a place , rack or cupboard where materials have been kept. To each Bin is attached a card to show the stock position of Bin. This card is known as Bin card / stores card. It is a quantitative records of receives, issues and balances of items. It contains only physical quantity, but not rupee value.

BIN Card	Store Ledger
It is record of quantities only.	It is record of quantities and values.
It is maintained by the store keeper.	It is maintained by the cost clerk.
It is attached to the bin	It is kept in the cost office.
Entries are made by the store keeper	Entries are made by the cost clerk.
Entries are made along with each transaction.	Entries are made periodically.
Posting are made before the transaction.	Posting are made after the transaction.

7. Describe fully the procedure adopted by Purchase and Stores Departments for efficient purchasing of materials.

Ans. Although the details of a purchase procedure may differ from concern to concern, the important procedures in purchasing and receiving of materials are as follows; assuming that purchases are centralised:

1. Purchase Requisition: Purchases of materials are initiated through purchase requisitions. It is a formal request by the head of the department or other authorities to the purchase manager to purchase the specified materials.

2. Selection of Suppliers: When the purchasing department receives a duly authorised purchase requisition, a source of supply has to be selected. The purchase department generally maintains a list of suppliers for each type of material and selects a particular supplier after inviting tenders. The important rule is to buy the best quality materials at the lowest possible price after giving due consideration to delivery dates and other terms of purchases. Purchase should be made from dependable sources of supply and ethical standards in dealing with suppliers should be maintained.

3. Purchase Order and Follow-Up: When the supplier has been selected, the most common procedure is the preparation of a purchase order. The purchase order is the form used by purchasing department authorising the suppliers to supply the specified materials at a price and terms stated therein.

4. Receipt of Materials: All incoming material should be received by the receiving department. This department performs the functions of unpacking the goods received and verify their quantities and conditions. The quantity is checked against the purchase order copy and the supplier's advice note which is normally received along with the goods.

5. Inspection and Testing of Materials: Goods received should be inspected for quantity to ensure that they comply with specifications stated on the purchase order. Where technical or laboratory inspection is necessary, the goods are passed to laboratory which will provide a report on the quality of goods.

An inspection report is prepared to show the results of the inspection. This report is either prepared separately or incorporated in the goods received note. In either case, the report is forwarded to the purchasing department.

6. Return of Rejected Materials: Where materials received are damaged or are not in accordance with the specifications, these are usually returned to the supplier along with a debit note, informing him that his account has been debited with the value of materials concerned.

7. Passing Invoices for Payment: When the invoices are received by the purchasing department, the process of assembling the business paper concerned with each purchase and preparation of vouchers begins. Invoices are numbered serially and entered in the invoice register.

The following documents are assembled in support of the invoice:

- (a) Purchase Order.
- (b) Goods Received Note.
- (c) Inspection Report.
- (d) Debit/Credit Note.

After comparing these documents with the invoice, if it is found that the invoice is in order, the purchase manager will sign it and pass it to the accounts department for payment.

8. Briefly explain the essential features for a successful wage plan.

Ans. A Successful wage plan must have the following essential features:

- (i) Fairness:** A wage plan becomes fair to both employers and employees when it is based on scientific time and motion study.
- (ii) Minimum Wage Guarantee:** Whether under legal compulsion or not a minimum wage must be guaranteed to workers.
- (iii) Link between Effort and Remuneration:** Unless a link is established between the value of work done and the remuneration payable, it is bound to be unfair to either the worker or to the employer.
- (iv) Satisfaction for the workers:** The wage plan must satisfy the workers and as a result there will be high morale and low labour turnover.
- (v) Flexible:** The system should be flexible to allow necessary changes which may arise.
- (vi) Cost of Implementation:** The cost of implementation of the wage plan must be low as possible.
- (vii) Conformity with legal provisions and trade agreements:** The wage plan must not violate any of the provisions of law relating to wage payment nor it should violate any trade agreement.
- (viii) Simple:** The method should be simple and capable of being understood by the workers.

To conclude the system of wages should ultimately result into higher production improved quality of the output and the contented labour force.

9. Briefly explain the factors considered before selecting the method of remuneration.

Ans. Method of remuneration is many in numbers, but they can be grouped under two heads:

- (a) Remuneration on time basis.
- (b) Remuneration on work / result basis.

Following factors are considered before selecting a suitable method of remuneration:

- (i) Easy understandability:** The remuneration method must be easily understood by an average worker, otherwise there may be misunderstanding. Simple remuneration method involves less clerical cost in preparing wage bills and cost records.
- (ii) Choice between quality and quantity:** If an organization considers that quantity is much more important than quality, a method of remuneration by result basis should be selected. If, however, quality is considered much more important than quantity, a method of remuneration on the basis of time should be selected.
- (iii) Effect on overhead:** The fixed overhead is spread over the units produced. So higher the output lower is the incidence of fixed overhead per unit. A method of remuneration by result basis reduces

fixed overhead per unit, while in case of a method of remuneration on the basis of time, the incidence of fixed overhead per unit is likely to be higher.

(iv)Satisfaction to workers: The method of remuneration must satisfy the worker; otherwise, there will be high labour turnover. Method which creates satisfaction shall help to attract efficient workers from outside the organization.

(v)Conformity: The method of remuneration selected must be in conformity with that used by similar organization in similar sphere.

10. Briefly explain the different method of calculation of wages / remuneration.

Ans. Methods of remuneration are many in numbers but they can be grouped under two heads:

(A) Remuneration on time basis.

(B) Remuneration on Result/ Work Basis.

(A)Remuneration on time Basis: Under this method of wage payment, the worker is paid at an hourly, daily, weekly or monthly rate.

Under this method, there are different schemes:

(i)Flat Time Rate: Under this system, the worker is paid on his attendance at a specified rate irrespective of his output.

(ii)High wage Plan: In this case the time rate is fixed at a level higher than the rate prevailing in the locality for a similar employment.

(iii)Guaranteed time rate: Under this system, the payment is at the time rate, but adjusted to the cost of living.

(iv)Differential Time Rate: Under this system, different time rates are fixed for different levels of efficiency.

(B)Remuneration on result /work basis: Under this system of wage payment a fixed rate is paid for each unit produced, job completed or operation performed.

Under this system, wages directly related with the output.

Following are the various systems for remuneration on result basis:

(i)Straight Piece Rate system: Under this system, the worker gets a flat rate per unit of output.

$$\text{Earnings} = \text{No of units produced} \times \text{piece rate}$$

(ii)Taylor's Differential piece rate system: FW Taylor the father of scientific management introduced this system. According to this system:

(a)There are two piece rate system one is lower and the other is higher.

(b)Lower piece rate is for the output below standard and higher piece rate is for the output at / above the standard.

(iii)Merrick's Multiple piece rate system: It is the modification of Taylor's system; Merrick's introduced three rates in place for two. They are:

Efficiency Attained	Payment
Upto 83.33 %	100% of piece rate
Above 83 .33% but upto 100%	110% of piece rate

Above 100%	120% of piece rate.
------------	---------------------

Apart from these methods there are also some incentives scheme/ bonus schemes. Some of these are:

(iv)Halsey premium plan: Under this scheme a standard time is fixed for the performance of each job and the worker is paid the agreed rate per hour for the time spent thereon plus a fixed percentage (may be 50%) of the time.

(v)Rowan's scheme: It is similar in regard to the determination of bonus. Under this plan, the bonus is that portion of the wages of the time taken which the time save bears to the standard time allowed.

11. State the advantage and disadvantages of time rate system/remuneration of time basis.

Ans. Advantages:

- (i)It is simple to understand and easy to operate.
- (ii)Each worker is assured of minimum wages.
- (iii)Standard of the quality is maintained.
- (iv)It is preferred by trade unions.
- (v)There is no discrimination among the workers.
- (vi)It is benefited by average and below average workers.

Disadvantages:

- (i)Efficient and inefficient gets the same wage i.e., efforts and rewards are not co-related.
- (ii)Equality in wages to all, will depress the superior worker.
- (iii)Constant supervision is needed to reduce idle time thus labour cost increases.
- (iv)It will encourage a tendency among the workers to go slow so as to earn overtime wages.
- (v)Inefficiency results in upsetting of production schedule and increases the cost per unit.

12. State the advantages & disadvantages of piece rate system/ payment by result basis / remuneration on work basis.

Ans. Advantages:

- (i)Workers are paid according to their merit because distinction is made between efficient & inefficient worker.
- (ii)Payment is made in respect of the output only.
- (iii)Efficient workers produce more and hence they earn more.
- (iv)No payment for ideal time is required.
- (v)Greater output reduces fixed overhead per unit.
- (vi)It reduces supervision cost.

Disadvantages:

- (i)Where the output cannot be measured in terms of homogeneous units, the method shall not be applicable.
- (ii)Quality of work is likely to deteriorate.
- (iii)There may be more scraps, defective etc.
- (iv)Speedy production may create more chances of break down.
- (v)Fixation of piece rate is a difficult task.

13. What is merit rating? State its merits & demerits. Mention the factors that are examine for merit rating purpose.

Ans. Merit rating refers to evaluation of the individual merits of the employees. It aims at evaluating the employees' actual performance of a job. The main object of merit rating is that an employee is to be rewarded suitably on the basis of merits.

Advantages:

- (i) It assesses the standard performance of each individual worker.
- (ii) It provides a basis for rewarding for high merit without applying detailed work study.
- (iii) It provides a basis for remunerating the indirect worker whose performance cannot be easily measured.
- (iv) It choose suitable worker for job.
- (v) It provides a basis for promotion, increment etc.
- (vi) It improves labour relations and reduces labour turnover.

Disadvantages:

- (i) Wrong rating may lead to labour unrest.
- (ii) Factors considered for merit rating may not be relevant.
- (iii) Rating may be influenced by previous records of an employee and thereby justice may be lost.
- (iv) Rating may be opposed by the employees or it may not be taken in recognition.
- (v) Incentives allowed on the basis of merit rating may not satisfy the workers.

The following factors are usually examined in the employee for merit rating purpose:

- (i) Attendance. (ii) Co-operating. (iii) Discipline. (iv) Knowledge. (v) Skill. (vi) Experience.
- (vii) Reliability. (ix) Sense of responsibility and judgment. (x) Initiative. (xi) Quantity & quality of output, etc.

14. What is labour turnover? Explain the causes of labour turnover. Also point out the effects of labour turnover.

Ans. Labour turnover may be defined as the rate of change in the labour force i.e. it denotes the percentage of change in the labour force of an organization. In other words, it is a term used to describe the movement of shifting into and out of an organization by the employees.

Causes of labour turnover: The causes can be broadly divided into two:

Avoidable causes:

- (i) Dissatisfaction of the job.
- (ii) Dissatisfaction with wages.
- (iii) Poor working condition.
- (iv) Unsuitable working hours.
- (v) Non-cooperative attitude
- (vi) Lack of promotions.
- (vii) Unfair method of promotions.
- (viii) Unsympathetic attitude of management.
- (ix) Inadequate protection.

(x) Lack of proper training facilities.

Unavoidable causes:

- (i) Retirement due to old age.
- (ii) Death.
- (iii) Marriage.
- (iv) Accident making worker permanently incapable.
- (v) Disliking a job.
- (vi) Workers finding better job at some other places.
- (vii) Workers may be discharged due to inefficiency.

Effects of labour turnover:

- (i) Frequent changes in the labour force give rise to interruption in the continuous flow of production with result that overall production is reduced.
- (ii) New worker takes time to become effective. So lower efficiency of new workers increases the cost of production.
- (iii) Selection and training cost of new workers recruited to replace the workers who have left increases the cost of production.
- (iv) New worker being unfamiliar with the work gives more scrap, rejects and defective work which increases the cost of production.
- (v) New workers being inexperienced workers are more prone to accidents.

Methods Suggestion of labour turnover:

- (i) Better working condition may be provided to workers.
- (ii) Selection of candidates must be made on the basis of scientific methods.
- (iii) There must be a cordial relation between employer and employees.
- (iv) There must be a job security and opportunities for arrears, advancement etc.
- (v) A good wage policy and incentive plans must be devised.

14. What is time keeping? State the requisite of a good time keeping system. Mention different methods of time keeping.

Ans. Time keeping is concerned with the recording of time for the purpose of attendances and wage calculation. It is concerned with recording of the time of workers arrival and departure from factory.

Requisite of a good time keeping system:

- (i) System of time keeping should be maintained for piece worker to ensure discipline; otherwise workers who are paid by time are likely to be dissatisfied.
- (ii) There should also be a provision and recording of time of piece workers so that regular attendance and discipline may be maintained.
- (iii) Time of arrival as well as time of departure of workers should be recorded so that total time of workers may be recorded and wage may be calculated.
- (iv) As far as possible method of recording of time should be mechanical so that chance of dispute of time may not arise between workers and time keepers.
- (v) Late comer should record late arrivals.
- (vi) The system should be simple, smooth and quick Methods of time keeping.

There are two types of time keeping. They are:

- (i) Manual method.
- (ii) Mechanical method.

Manual method:

The following are the method generally used for attending the method.

- (a) Attendance register method
- (b) Metal disc method.

Mechanical method:

The following are the types of mechanical method.

- (i) Time recording clock.
- (ii) Dial time recorder.

15. What is Time Booking? State its objectives. Explain the different methods of time booking.

Ans. Time booking is a system of recording the time spent by each worker on various jobs, orders or processes.

Objectives of Time Booking:

- (i) To calculate the labour cost of jobs done;
- (ii) To apportion overheads against jobs;
- (iii) To evaluate performance of labour and to make comparison of actual labour time with budgeted time;
- (iv) To ascertain idle time for the purpose of control;
- (v) To determine overhead rates for absorbing overhead expenses under labour hour and machine hour methods; and
- (vi) To calculate bonus and wages provided the system of payment of wages depends on the time taken.

Methods of Time Booking: The different methods of Time booking are:

(i) Daily Time Sheet: It is daily record for each worker in respect of time spent by him on each job during the day.

(ii) Weekly Time Sheet: It is weekly record for each in respect of time spent by him on each job during the week.

(iii) Job Card or Job Ticket: Job Card is a record for each job in respect of time spent by various workers on that job.

(iv) Combined Time and Job Card: It is record of attendance time and work time of a worker on the same sheet.

(v) Piece-Work Card: This card is used where workers are paid on piece-rate system. A piece- work card is allowed to each piece- worker. One card may serve the purpose of recording the work done on several jobs.

16. What are the different types of material losses? Indicate the principles to be followed for accounting and control of such losses.

Ans. Material losses can be classified into four losses as:

1. Waste: Waste is the portion of basic raw material lost in processing, having no recoverable value. Waste may occur due to evaporation, breaking the bulk, loading and unloading, leakage, inefficient handling, fire, etc. It may be visible or invisible, **for example**, gases, dust, and smoke and unsaleable residues. The effect of waste is to increase the unit cost of production, since the total cost is spread over a smaller number of good units.

Accounting Treatment:

The accounting treatment of waste depends upon whether the waste is normal or abnormal. For normal waste arising from breakage, evaporation, deterioration, shrinkage in production, the total cost incurred is distributed over the good output. The treatment is based on the principle that normal losses should be borne by good output.

Abnormal wastage of material arising due to abnormal reasons, i.e. theft, fire, careless handling, etc., is not added to the cost of production but is transferred to costing profit and loss account. This is necessary to avoid any fluctuation in cost of production.

Control of Waste:

In order to control waste in manufacturing industries, a waste report is prepared at regular intervals. The actual percentage of waste is compared with the standard percentage and remedial measures are taken to remove any abnormal waste.

2. Scrap: Scrap is defined as the incidental residue from certain types of manufacture usually of small amount and low value recoverable without further processing. **Examples of** scrap are available in operations like turning, boring, punching, shaving, moulding, etc.

There are three types of scraps, namely-

(a) Legitimate scrap, i.e. scrap which is predetermined and arises due to the nature of operations like turning, boring, punching, etc.

(b) Administrative scrap, i.e. scrap which arises due to administrative action such as change in the method of production,

(c) Defective scrap, i.e. scrap which arises because of the use of inferior quality of material or bad workmanship or defective machine.

There is difference between waste and scrap. Waste cannot be realised whereas scrap can be realised. Scrap is always visible whereas waste may or may not be visible.

Accounting of Scrap:

The usual methods for accounting of scrap are as follows:

(i) The sale value of scrap is credited to profit and loss account as other income. The unit cost of production is, therefore, inclusive of cost of scrap. This method fails to secure effective control over scrap as detailed records are not kept and scraps are not identified to jobs or processes.

(ii) From the sale proceeds of scrap selling and distribution costs are deducted and the net value is deducted from material cost or factory overhead. The effect of this method is to reduce material cost or overhead recovery rate. This method fails to secure effective control of scraps arising in processes or jobs. It is suitable in cases where several production orders are taken in hand and it is not possible to segregate the value of scrap for each order.

(iii) The value realised from sale of scrap is credited to particular job, process or operation. This method has an advantage of identifying scrap with each operation, process or job.

Control over Scrap:

Control over scrap is possible by:

- (i) Setting standards for scrap,
- (ii) Determining the responsibility for scrap,
- (iii) Keeping up proper records of scrap in the form of scrap reports.

3. Spoilage: Spoilage consists of goods that do not meet production standards and are either sold for their salvage value or discarded without further processing. Spoilage cost is the difference between costs incurred up to the point of rejection less the disposal or salvage value. When spoiled goods are discovered, they are taken out of production and no further work is performed on them.

Accounting of Spoilage:

- (i) If spoilage is caused by an order's exacting specifications, the spoilage cost as reduced by the recovery or sales value of the spoiled units should be charged directly to that order.
- (ii) If some spoilage is normal in the manufacturing process, the cost of such spoilage will be borne by good units.
- (iii) In case of abnormal spoilage, cost of spoilage is transferred to costing profit and loss account.

Control of Spoilage:

For effective cost control, normal spoilage rates should be established for each department and for each type or class of material. Weekly or monthly spoilage reports should be reviewed by the inspector. The actual spoilage is compared with the standard or normal spoilage and steps are taken to remove any abnormal spoilage.

4. Defectives: Goods that do not meet production standards and must be processed further in order to be saleable as good units are known as defectives. Defective work can be corrected to meet specified standards with additional materials, labour and overhead. Defectives may arise due to sub-standard materials, poor workmanship, bad supervision and careless inspection.

The additional cost of rectifying the defectives is added to the total cost and the quantity of defectives rectified is added to the quantity of good output because defective units rectified can be sold as 'first' or 'seconds'. The main difference between spoilage and defectives is that spoilages are sold without further processing, whereas defectives are rectified by additional expenditure and sold as 'first' or 'seconds'.

Accounting of Defectives:

- (i) If the defective units are clearly identified with a numbered job order and the defects are peculiar to the job, the cost to complete the defective units can be charged to the job.
- (ii) If defective units occur irregularly, the cost of rectification is properly charged to factory overhead.
- (iii) If the defective production is due to abnormal reasons, the rectification cost is transferred to costing profit and loss account.

Control of Defectives: On the receipt of defective work report, a decision is taken whether to rectify or not to rectify the work. All costs of rectification are collected against the rectification work order. Adequate steps should be taken to see that defective work remains within standard limits.