MATERIAL COST

Q 1. What is inventory control? Mention its objectives and various methods of inventory for proper control?

Ans. Inventory comprises stock of raw materials, work-in-progress, finished goods, stores and components. The aim of inventory control is to achieve maximum efficiency in the management of inventory.

Investment in inventory normally accounts for an important part of the total assets. Adequate and proper control of inventory, therefore, is an important feature of cost accounting system.

<u>Objectives of inventory Control:</u>

1. Effective use of financial resources available to business, i.e. to maintain the investment in inventory at the lowest level consistent with operating requirements.
2. Avoidance of the "out of stock' danger, i.e. to provide a supply of required materials without any delay for efficient and uninterrupted operations.
3. Economy in purchasing as affected by quantity buying and favorable raw materials market.
4. Service to customers i.e. maintaining sufficient stocks of finished products to meet reasonable expectations of customers for prompt delivery of their orders.
5. Accurate and regular material reports to management by keeping perpetual inventory and other up-to-date records.

The various techniques used for inventory control are as follows:

- ✓ ABC analysis.
- ✓ Level setting
- ✓ Economic purchase quantity
- ✓ Proper purchase procedure
- ✓ Proper storage
- ✓ Perpetual inventory system
- ✓ Establishment of a system of budgets.
- ✓ Review of slow and non-moving items.
- ✓ Use of ratios, e.g. inventory turnover.

Q 2. What do you understand by ABC Analysis? What are its advantages?

Ans. The ABC method is an analytical method of stock control which aims at concentrating efforts on those items where attention is needed most. It is based on the premise that a small number of the items in inventory may typically represent the bulk money value of the total materials used in production process, while a relatively large number of items may represent a small portion of the money value of stores used and that small number of items should be subject to the greatest degree of continuous control.

Under this system, the materials stocked may be classified into a number of categories according to their importance, i.e. their value and frequency of replenishment during a period. The first category, we may call it the group of 'A' items, may consist of only a small percentage of total items handled but its combined value may be a large portion of the total stock value. The second category, naming it as group of 'B' items, may be relatively less important. In the third category, consisting of 'C' items, all the remaining items of stock may be included which are quite large in number but their value is not high.

The advantages of ABC analysis are:

1. Closer and strict control on those items which represent a major portion of total stock value.
2. Investment in inventory can be regulated and funds can be utilized in the best possible manner.
3. Savings in stock carrying costs.
4. Helps in maintaining enough safety stock for C category of items.
5. Scientific and selective control helps in the maintenance of high stock turnover rate.

Q 3. **What is meant by 'maximum level', and 'ordering level' with regard to maintenance of stocks? What are the factors that govern the fixing of levels?**

Ans. The following factors help in the fixation of these levels:

a) Rate of consumption of materials.
b) Lead time, i.e. time lag.
c) Storage capacity.
d) Availability of funds for investment in inventories.
e) Cost of storage.
f) Risks of loss due to deterioration, theft, fire, etc.
g) Seasonal factors-certain materials are cheaply available during certain seasons.

TYPES OF STOCK LEVELS:

✓ **Maximum Level:-** The maximum level that quantity of material above which the stock of any item should not generally be allowed to go.
The formula for computing maximum level is as follows:
Maximum Level =Re-order level + Re-order quantity- (Minimum consumption × Minimum Re-order Period).

✓ **Minimum level:-** The minimum level is that level of stock below which it should not normally be allowed to fall.
Minimum level is compound as under:
Minimum level=Re-order level- (Normal consumption × Normal Re-order period).

✓ **Ordering Level or Re-order Level:-** This is that level of materials at which a new order for materials is to be placed. In other words, this is the level at which a purchase requisition is made out.
The formula is as follows:
Re-order level=(Maximum consumption × maximum Re-order period)

✓ **Average Stock level:-** This is computed with the help of the following formula:
Average stock level=Minimum level +1/2 of Re-order quantity.
OR
Average stock level=(Minimum level + Maximum level)/2

✓ **Danger Level:-** It is the level below which stock should not be allowed to fall except under emergency conditions. When stock reaches this level, urgent action for purchase is initiated.
Danger level is below the minimum level. But some firms prefer to fix the danger level above the minimum level and below the re-order level. However, fixing danger level below the minimum level is meant for taking corrective action whereas fixing it above the minimum level is for preventive action.

Q 4. **Give the meaning and treatment of scrap, waste, spoilage and defective?**

Ans. **a) Scrap:-** It is an incidental residue from the materials used in manufacturing operations, usually of small value and is recoverable without further processing.
For control purposes, standards for scrap may be set up, responsibility may be determined for scrap by departments, function, etc. Scrap report may be prepared and remedial action should be taken:
There are mainly three methods of accounting of scrap:

- ✓ Sale value of scrap is credited to profit and loss Account.
- ✓ Net value, i.e. the sales value minus its selling and distribution costs, credited to overheads A/c.
- ✓ Scrap value realized being credited to job or process responsible for scrap.

b) Waste: waste is that portion of raw material which is either lost or which evaporates or shrinks in a manufacturing process.
The cost of normal waste is treated as part of the cost of production and total cost incurred is distributed over the reduced output, i.e. the units of good production only. The cost of abnormal waste should be excluded from the total cost and taken to profit and loss account.

c) **Spoilage**: Production that does not meet quality standard and is disposed of without further processing is known as spoiled material. The cost of normal spoilage is treated as a part of the cost of production. Cost of abnormal spoilage does not form a part of the cost of production and should be written off the closing profit and loss account. A spoilage report should be prepared and steps may be taken to control any abnormal spoilage.

d) **Defectives**: This is the production which is below standard specification or quality but which can be reworked by additional applications of material, labour and processing and made into saleable condition. The additional cost to be applied to a defective product is known as rectification cost or Re-operation cost

Where the defective production is inherent in the process of manufacturing and can be identified with specific jobs, the cost of rectification is charged to specific jobs. If it cannot be identified with specific products or jobs, the cost of rectification is charged to the manufacturing overhead.
But if the defective production is due to the fault of a particular department, the cost of rectification is directly charged to that department.
If the defectives arise due to the wrong instruction from the customer, it is charged to the job account and recovered from customer.
If the defectives arise out of abnormal circumstances, the cost of rectification is charged to profit and loss account.

Q 5. **Discuss the advantages and disadvantages of centralized purchasing of materials.**

Ans. Purchase may be centralized or decentralized. In decentralized purchasing, there is only one purchase department which makes all purchases of all types of raw materials and other items. In decentralized purchasing, each department is authorized to make its own purchases. However, most businesses operate of central purchasing system which is usually a very satisfactory arrangement. But decentralized purchasing may suit where different production units are located in different cities or at long distance from each other.

Advantages of centralized purchasing:

1) As Expert may be purchasing. They have specialized knowledge and skill

2) Bulk purchases which result from centralized purchasing, gives economies of scale.
3) A firm policy can be initiated with regard to terms of purchases, e.g. terms of payment, cost of delivery, etc.
4) It effect economy in the use of staff, accommodation, forms and stationery.
5) Effective control over inventories is facilitated.
6) It also facilities standardization of materials.

Disadvantages of centralized purchasing:

1) The main disadvantage of centralized is that it is expensive due to increase in administration cost and small firms may not be in a position to afford it.
2) Centralized purchasing is also not suitable when plants are lo0cated far away from one another or are using different basic raw materials.

Q 6. **Write short note on following:**

1. Bin card — 2. Bill of Materials
3. Materials requisition note — 4. Imprest system of stores
5. Material transfer note — 6. Material return note

Ans. **1. Bin card:** Material is kept in appropriate bins, drawers of other containers. A bin card is made out for each type of each type of material. It shows quantities of each materials received, issued and in stock. Maintaining a bin card is not a part of the accounting record as such, but it shows the quantity of each material of each material in hand at all times and is a check on the stores ledger in the accounting department..

Bin card

Description ……………………….. Bin card……………….
Stores ledger no. ………………… Code No.……………..
Minimum level……………………..
Unit……………………
Re-order level……………………… Re-order quantity……

Date	Received G.R. No.	Quantity	Issued S.R No.	quantity	Balance quantity	Remarks audit notes & remarks

2. Bills of materials:

Sometimes all the materials required for a particular job are listed by the production department on a single document which is known as a bill of materials. This is department on a single document which is known as a bill of materials . This is passed on the stores department to serve in lieu of materials requisition. When the job is started, all the materials listed on the bills are sent to the production department.

Bill of Materials

No. …………….
Job order no.
Date………….

Item No.	Description	Code No.	Quantity or weight	Rate Rs.	Amount Rs.

Drawing office Officer	storekeeper	Account

3. Materials requisition note:

It is a document which is used to authorized and records the issue of materials from store. The storekeeper should issue materials on the presentation of duly authorized stores requisition note. It should be appreciated that this is a key document in virtually all closing systems and serves the dual purpose of:

a. Authorizing the storekeeper to issue material; and
b. Providing a written record of usage of materials.

MATERIALS REQUISITION NOTE Job No. SI. No. Department: Date:					
SI. No.	Description	Material Code No.	quantity	Rate Rs.	Value Rs.
Entered in Bin card : Stores ledger : Department in charge					

4. Imprest system of stores:

Where maintaining a central store does not suit, the ideal solution is to have a central store with sub-stares, imprest system may be used which operates in a similar way as an imprest petty cash system. Under the imprest system of stores, replenishment of each item of stores is made to the sub-stores at the end of a specified period so that the stock level is resized to the predetermined level. This means quantity issued during the period.

5. Material transfer note:

If material are transferred from one department or job to another within the organization, than material transfer note should be raised. It is a record of the transfer of materials between stores, cost centres or cost units showing all data for making necessary accounting entries. A specimen of material transfer note is given.

MATERIALS TRANSFER NOTE Transfer from : SI. No. Transfer to : Date :					
SI. No.	Description	Material code No.	quantity	Rate Rs.	Value Rs.
Issuing dept. Store keeper					

6. Material return note:

If materials received from the stores are not of suitable quality or if there is surplus material remaining with the department, they are returned to stores with a note called, 'material return note evidencing return of material from department to stores.

MATERIALS RETURN NOTE					
Date of return: SI. No. Date :					
SI. No.	description	Material code	Quantity	Rate Rs.	Value Rs.
Returning dept. store Keeper					

Q 7. What are the various factors that influence the selection of a particular method of pricing the issue of materials stores ?

Ans. There are various methods of pricing issues of materials. The problem arises about the selection of a proper method. The following are the general principals which should guide the decision with regard to the selection of a proper method.

1. Frequency of receipts and issue transactions.
2. Extant of price fluctuations.
3. The value of material cost in proportion to total production cost.
4. Whether issues can be identified with purchased lots.
5. Policy regarding the valuation of closing stock. This is because each method causes a different value for the stock.
6. Type of costing system in use.
7. Customs within the industry, i.e. the method being adopted by other firms in the same industry.

Q 8. **Explain FIFO and LIFO method** of pricing of issue of materials ? Which of these methods would you recommend in rising prices and why?

Ans. First In first out (FIFO):

This method operates under the assumption that the material's which are received first are issued first and, therefore, the flow of cost of materials should be also in the same order. In other world, the materials issued are priced at the oldest cost price listed in the store ledger account and consequently the materials in hand are valued at the price of the latest purchases.

Advantages:

1) The method is realistic in so far as it assumes that materials are issued to production in the order of their receipts.
2) The valuation of closing stock tends to be nearer current market prices as well as cost.
3) Being based on cost, no unreleased profits enter into the financial result.
4) The method is easy to operate if the prices do not fluctuate very frequently.

Disadvantages:

1) The issue price may not reflect current market prices and, therefore, in times of rising prices, the charge to production is unduly low.
2) The cost of consecutive similar jobs may differ simply because the prior job exhausted the supply of lower priced stock. This renders comparison between different jobs difficult.

Last in first out (LIFO):

This method operates on the assumption that the latest receipts of materials are issued first for production and the earlier receipts are issued last, i.e. in the reverse order to FIFO.

Advantages:
1) The method keeps the value of issues close to the current market prices.
2) Unrealized profit or loss is usually made by using this method.

Disadvantages:
1) The value of closing stock may be quite different from the current market value and hence may not be acceptable for income tax purposes.
2) The method does not conform to the physical flow of materials.

Under conditions of rising market prices, LIFO method is generally considered better, this is so because under LIFO method reasonably correct effect of current prices is reflected in the cost and the cost is not understand.

Q 9. What is just time (JIT) purchase ? What are its advantages?

Ans. Just in time (JIT) purchases means the purchase of goods or materials such that the delivery immediately precedes their usage. The main advantages are as follows:
1) It results in cost saving, for example, the cost of stock out, inventory carrying, material handling and breakages are reduced.
2) Due to frequent purchases of raw material, the issue price is likely to be very close to the replacement price. As such, the method of pricing for valuing material issues becomes less important.
3) It attempts to extend daily deliveries to as many areas as possible so that the **goods spent less time in warehouse before they are exhausted.**

Q 10. A factory uses 4,000 varieties of inventory. In terms of inventory holding and inventory usage ,the following information is compiled:

No. of varieties of inventory	%	% value of inventory holding (usage)	% value of inventory usage (in end-product)
3,875	96.875	20	5
110	2.750	30	10
15	0.375	50	85
4,000	**100.000**	**100**	**100**

Classify the items of inventory as per ABC analysis with reasons.

Ans. Under ABC analysis, the items in inventory are classified according to the value of usage. In this question, the classification is done as flow:

Class 'A': it constitutes the most important class of inventories so far as the proportion of total value of inventory is concerned. In this question, class A inventory consists of 15 varieties of inventory because it carries 50% share in total inventory value and 0.375% in total varieties of inventory. Class A inventory requires inventory control system with constant attention by purchase and stores department.

Class 'B' inventory: it constitutes an intermediate position **in which the inventory is neither** very expensive nor very cheap. Quantity-wise also, they are neither few nor many. In total question, class B inventory consists of 110 items because it carries 30% share in total inventory value and 2.75% in total varieties of inventory. These items require formalized inventory system and periodic attention by purchase and stores department.

Class 'C' inventory: it constitutes a large number of items which is also very cheap. In this question, class 'C' inventory consists of 3,875 varieties of inventory because it carries 20% shares in total inventory value and 96.875% in total varieties of inventory. The items in this class required only relaxed inventory control.

Q 11. Define VED analysis.

Ans. Here V stands for vital items and their stock analysis requires more attention, because out of stock situation will result in stoppage of production. E means essential items. Such items are considered essential for efficient running but without these items the system would not fail. Care must be taken to see that they are always in stock. D stands for desirable items which do not affect the production immediately but availability of such items will lead to more efficiency and less fatigue, VED analysis can very useful to capital intensive process industries.

Q 12. Define perpetual inventory system. What are its advantages.

Ans. Perpetual inventory system under this system a continuous record of receipt and issue of materials is maintained by the stores department and the information about the stock of material is always available.

The entries are made in Bin cards and storage ledger as and when the receipts and issues of materials take place and ascertaining the balance after every receipt or issue of materials.

Advantages:

- ❖ This system avoids the disruptions to production or trading caused by the periodic stock taking.
- ❖ This system facilitates production planning and inventory control.
- ❖ It helps in having a detailed and more reliable check on the stocks.

Q 13. Define continuous stock-checking. What are its advantages.

Ans. Under this system, physical stock verification is made for each item of stock on continuous basis, it is physical checking of the stock records with actual stocks on contiguous basis.

CIMA defines "continuous stock taking is the process of counting and valuing selected items at different times on a rotating basis".

It is a method of verification of physical stock on a continuous basis instead of at the end of the accounting period. It is a verification conducted round the year, thus covering each item of store twice or thrice. Valuable items are checked more frequently than the stocks with lesser value.

Advantages:

- ❖ Any discrepancies, irregularities or changes are detected at early stage and brought to the notice of management.
- ❖ It acts as a moral check on stores staff and acts as a deterrent to dishonesty.
- ❖ It insists on up-to-date maintaining of stock records.
- ❖ It is carried out by independent staff from store keepers avoiding any irregularities in stock taking.
- ❖ The disruption in production caused by periodic stock taking is eliminated.
- ❖ Control over stock is improved by eliminating over stocking or running out of stock.
- ❖ More time is available, reducing errors and allowing time for investigations.

❖ Regular skilled stock takers can be employed, reducing likely errors.

Q 14. Define periodic inventory system. What are its advantages.

Ans. Periodic stock taking system- under this system the stock levels are reviewed at fixed internals e.g., at the end of every month or three months.

The aim of periodic stock taking is to find out the physical quantities of materials of all types that are physically counted at a given data.

Advantages:

1) It is must less costly as compared with perpetual stock-taking.
2) Stock taking becomes 'once in a period, affair, thereby, it does not become a hindrance in the period in which normal business affairs are carried on.

Q 15. What do you understand by 'overhead cost' and explain briefly the meaning of the terms fixed and semi-fixed and variable overhead cost giving one example of each?

Ans. In simple words, overhead cost are those cost which are incurred for the benefit of a number of cost centres or cost units and therefore cannot be identified with a particular cost centre or cost unit. Examples of overhead are salaries of general manager, rent of building, lighting expenses, power costs insurance etc.

There are two tests of classify an item under overheads:

a. Identification, and
b. Convenience.

An item of cost which cannot be identified with a particular cost unit is to be treated as overhead,. Similarly, an item that can be identified with a particular cost unit but found inconvenient to do so or involve avoidable clerical effort and expenditure is also treated as overhead. Examples are, carriage inwards, sundry raw materials of small value like thread used in stitching a shirt, etc.

Fixed overhead cost: It refers to those expenses which do not vary with the volume of production within certain limits. The amount of fixed overhead tends to remain constant for all volume of production within the installed capacity of plant. For example, rent of office, salary of works manager remains the same even if the production goes up or comes down.

Fixed overhead has the following characteristics:

- Total amount of fixed cost remains unchanged a irrespective of the volume output.
- Fixed cost per unit changes with increase or decrease in volume of production.

Variable overhead cost: variable overhead cost varies in direct proportion to the volume of production. Such overheads increase in total as production goes up and these correspondingly decrease when the production falls.

Main characteristics of variable overhead cost are:

- Total variable overhead cost changes in production to change in volume of output.
- Variable overhead cost per unit remains fixed.

Semi variable overhead: there are certain items of overhead cost which are neither fixed nor variable in relation to the volume of production. These have the characteristics of both the fixed and the variable. A part of such expenses is fixed and part is variable and, therefore, these are known as semi-variable or semi-fixed, for instance, telephone expenses consists of hire charges as well as the call expenses. Hire part is fixed whereas fee for calls is variable. The Total of the two becomes semi-variable.

Q 16. What are the advantages of classifying indirect expenses into fixed and variable items?

Ans. overhead may be classified according to their variability characteristics into fixed, variable and semi-variable. The advantages of such classification may be listed as under:

1. **Preparation of budget estimates:** with the help of this classification, expenses can be estimated accurately and flexible budget can be drawn showing the different amount of expenditure for the different levels of activity.
2. Effective cost control: for the purpose of control, cost is classified into controllable and uncontrollable. Fixed costs are uncontrollable and are in the nature of policy costs. Variable costs are however, controllable ones, e.g., the expenditure on the repairs and maintenance of plant and machinery can be controlled by the maintenance engineer. Thus, the separation of the two leads to an effective cost control.
3. Preparation of break-even charts: for the preparation of break-even charts and study of cost-volume –profit relationship, segregation of cost into fixed and variable is quite essential.
4. Marginal costing: for the technique of marginal costing. It is essential that fixed costs should be separated from variable costs.

Q 17. Explain the following terms:
Cost classification
Cost allocation;
Cost apportionment;
Cost absorption.

Ans. Cost classification:

This is the process of grouping costs according to the common characteristics. This is essential in costing to set up the various groups according to which costs are to be classified and accumulated. Costs may be classified according to various characteristic like nature, function, variability, controllability, etc.

Cost allocation:

This is the allotment of whole items of costs to costs centers or cost units. In other words, it is a process or charging the full amount of cost to a cost enter or a cost unit.

Cost classification is the first step in costing. It is primarily concerned with identifying and grouping of expenses into distinct class of group, whereas, cost allocation deals with the allotment of whole items of costs to cost enter or cost units.

Cost apportionment:

It is the process of charging expenses in an equitable proportion to the various cost centers or cost centers of costs units. Apportionment is done in respect of those items which cannot be allocated to any specific cost centre. For example, the salary of general manager cannot be allocated wholly to a production department as he attends in general to all the departments .

Cost absorption:

This is the process of charging to the product or the output of a production centre all the overhead expenses which have been allocated and apportioned to it. The purpose behind absorption is that expenses should be absorbed in the cost of the output of the given period. For overhead absorption, some suitable basis has to be adopted.

Q 18. **Define unit costing. In what type of industry it is applied ?**

Ans. Unit coasting is the coasting technique adopted by those undertaking which produces only one product or a few grades of the Same product on large scale.

This costing technique is used in the following industries:

- Sugar Industry
- Shoe manufacturing industry
- Cement industry
- TV and Radio manufacturing, etc.

Q 19. **What are the advantages of preparation of cost sheet ?**

Ans.

- It reveals total cost and cost per unit.
- It discloses the total break up to total costs.
- It helps in fixing up selling price more accurately.
- It facilitates cost comparison.
- It helps in the preparation of cost estimates for the submission of tenders.

Q 20. **What are the characteristics of industries which uses unit costing?**

Ans.

- Identical or homogeneous goods are manufactured.
- Production is on large scale.
- The goods are capable of being expressed in convenient unit of measurement.

Q 21. **“Price Quotations requires preparation of estimated cost sheet”. Comment.**

Ans. It is often seen that the management has to quote prices in advance in relation to goods to be supplied in future. For this purpose, an estimated cost sheet is prepared to show the estimated cost of products to be manufactured. While preparing the estimated cost sheet, the cost of direct materials, direct wages and overheads are estimated on the basis of past cost structure after taking into account the present conditions and also the anticipated changes in future price level.

LABOUR COST

Q 22. **What is labour cost? What is the objective of study of labour cost?**

Ans. **Meaning:** Labour costs are "Costs incurred in relation to human resources of an enterprise." For example, wages paid to production workers, salary of mangers and officers, cost of training office staff etc, are considered as Labour Costs.

Objectives: The objectives of the study of labour cost are:

a) To keep the total amount of wages paid to workers at reasonable levels based on industry standards.
b) To motivate workers and harness their energies to increase output, thereby optimizing cost per unit.
c) To contribute to overall organizational profitability and employee-welfare.

Q 23. **Define direct and indirect labour cost.**

Ans. **Direct Labour Cost: -** It is the "cost of labour expended in altering the construction, composition or condition of a product." It is directly attributable and easily identified and allocated to the cost unit or cost centre. For example, all wages of labourers directly engaged in production and wages paid to workers engaged in construction site and direct wages.

Indirect labour Cost: - It is the "cost of labour not directly engaged in production." It is not directly attributable to the cost unit or cost centre. For example, wages and salaries to employees in Purchasing Department, Stores, office and Time-Keeping Department, Foreman and Supervisors, Maintenance Personnel etc. are indirect labour cost.

Q 24. **How will you deal with idle time cost in cost accounts? How can you control such costs?**

Ans. **Idle Time:** - When workers are paid on time basis, some difference is likely to arise between the time for which they are paid and the time they actually spend upon production. Idle time may be defined as that time for which wages are paid but no production is obtained.

Treatment of Idle Time Cost: From the point of view of treatment in cost accounts, idle time can be classified into normal and abnormal idle time.

Normal Idle time: - It refers to that loss of time which is generally unavoidable and is bound to arise. For example, time spent in setting the machines, adjusting the tools, moving from one job to another, tea breaks (if necessary), personal needs, etc. it will be seen that this wastage of times is of such a nature that it cannot be avoided and its cost is therefore, an expenses which the employer must bear.

Cost of normal idle time is directly charged to <u>factory overhead account.</u>

<u>Abnormal Idle Time: -</u> Where, due to some causes in no way connected with the usual routine of manufacture. Time is lost for which employer must pay, the time wasted represents abnormal idle time. It is mostly avoidable particularly when it is attributable to inefficiency of defective planning. Cost of abnormal idle time should be collected separately and written off to costing profit & Loss Account. It cannot be regarded as a cost of production.

Q 25. **Distinguish between Idle Times and idle Facilities. How are they treated in Cost Accounts?**

Ans. **<u>Idle Facilities:-</u>** The term facilities have a wider scope. It may include fixed assets such as building space, plant equipment capacity, etc., services such as production services, personnel services and production capacity as well. If firm is not able to make full use of all these facilities, then it is termed as idle facilities. Thus, idle facilities refer to that part of total production facilities which remain un-utilised due to any reason such as non-availability of raw material, lower demand, accumulation of stock, etc.

<u>Treatment of idle Facilities:-</u> Idle facilities cost, which are normal and arise due to unavoidable reason, should be treated as part of **<u>works overhead</u>**. On the other hand, abnormal idle facilities cost. Which arise due to plants or machines/facilities remaining idle on account to trade depression, strike, lockout, etc. should not be absorbed in production and be written off to ***Costing Profit and loss Account.***

Q 26. **Define overtime. Why is it necessary? How can overtime be controlled? How the overtime is treated in cost accounts?**

Ans. Overtime work is work done beyond normal working hours. The Factories Act provides for payments of overtime wages by double the normal rate of wages. Overtime work involves extra cost and should be resorted to only when extremely essential.

<u>Treatment of overtime Cost:</u> The treatment of overtime cost depends upon the circumstances under which it arises. The following treatment will be given to the overtime cost in the following circumstances:

a) Where the customers agree to bear the entire charge of overtime due to urgency of work, it should be charged direct to the job or work order concerned.

b) When overtime work is required to make up any shortfall in production due to some fault of management or some unexpected development, it should be charged to Closing Profit and Loss Account.

c) Overtime required because of some abnormal conditions like floods, earthquake, etc., should be charged to profit and loss Account.

d) Overtime required for seasonal pressure should be taken earlier as general overhead or as deferred expenses for absorption equitably over the entire product ion.

<u>Control of overtime:-</u> It is important that proper control over the overtime work should be exercised in order to keep it to the minimum. The following steps may be taken for such control;

i) All the overtime work should be duly authorised by a competent authority.

ii) Overtime cost should be recorded separately in order to investigate and to have proper planning for future.
iii) When overtime becomes a regular and permanent feature, it should be properly enquired into and, if necessary, more workers may be employed or shift working may be considered.
iv) If overtimes is due to lack of machines, steps may be taken to install more machines.

Q 27. **What do you understand by Labour Turnover? How is it measured? What are its causes? What are the remedial steps you would suggest to minimize its occurrence?**

Ans. **Labour turnover:-** It is a normal feature in every business organization that some workers leave their jobs and some new workers take their place: This mobility or change in the labour force is known as labour turnover.

Labour turnover may be defined as the number of workers left during the period in relation to the average number of workers employed during the period. In order words, it is rate of displacement of labour employed in an organization.

There are three different methods of measurement of labour turnover which may be given as follows;

- ✓ **Separation rate method**:- This is the most commonly used method. Under this method, measurement is made by dividing the total number of separations during a period by the average number of workers on the roll during that period.

$$\text{Labour turnover} = \frac{\text{no.of separation in a period}}{\text{average number of worke in the period}} \times 100$$

- ✓ **Replacement rate method:-** This method takes into consideration only the actual replacement of labour irrespective how many workers have left during the period.

$$\text{Labour turnover} = \frac{\text{no.of replacement in a period}}{\text{average number of workers in the period}} \times 100$$

- ✓ **Flux rate method**: This method takes into consideration both the number of workers left as well as number of new workers who have joined.

$$\text{Labour turnover} = \frac{\text{no. of separation} + \text{no. of replacement}}{\text{average number of workers}} \times 100$$

Causes of labour turnover:
The cause of high labour turnover may be classified in two categories.
(i) Avoidable, and **(ii)** Unavoidable.

Avoidable causes:

- ✓ Dissatisfaction with the job, remuneration in the market or lack of proper planning.
- ✓ Strained relationship with supervisors or fellow workers.
- ✓ Lack of proper amenities like medical and other facilities, recreational centres.

Unavoidable causes:

- ❖ Change of service for personal betterment.
- ❖ Retirement due to old age and ill health.
- ❖ Death.
- ❖ In case of female employees, domestic responsibilities, pregnancy or marriage.

<u>Control of excessive labour turnover:</u>

The following steps should be taken for minimizing the labour turnover:

- ❖ An adequate and satisfactory wage system.
- ❖ A sound personnel policy for recruitment, induction and training of labour.
- ❖ A satisfactory level of amenities and welfare measures like canteen facilities, medical services, recreation, etc.
- ❖ A satisfactory security scheme like family pension provident fund, accident compensation, etc.
- ❖ A satisfactory policy for transfers and promotions.

Q 28. **What do you understand by time and motion study ? In what way it is connected with remuneration of labour?**

Ans. **<u>Time study:</u>** It may be defined as "the art of observing and recording the time required to do each detailed element of an industrial operation". Its main object is *to determine the standard time required to carry out a job most efficiently*. Time study is the most important and well-known technique of work measurement.

<u>Motion study:-</u> This study deals with one aspect of methods study, i.e. to eliminate unnecessary movements of men and material. "Motion study is <u>the science of eliminate unnecessary, ill-directed and inefficient motions.</u> "Motion study is means to increase production.

<u>Time and motion study and remuneration of labour:-</u> When labour is remunerated on piece basis or by some incentive scheme, it is essential to determine the standard time required to complete a job. For this purpose, the time and motion study is the most scientific and accurate method. With this study, each job is split into small motion and each motion is thoroughly studied to cut out any unnecessary movements and to arrange the motions in a proper sequence to improve performance. The time allowed for each movement is determined and the aggregate of these gives this slandered time required to perform the job or operation.

Q 29. **Distinguish between Job evaluation and Merit Rating ?**

Ans. **<u>Job Evaluation:-</u>** Job evaluation may be defined as the rating of various jobs according to the responsibility and skill required for term. The basic object of job evaluation so that relative remuneration can be fixed for different jobs. The important principle behind job evaluation is that jobs which are of the same relative worth should the same amount of wages or salaries.

The main factors commonly considered for job evaluation are as follows:

- ❖ Knowledge and education required for the job.
- ❖ Skill and experience required.
- ❖ Training needed.
- ❖ Responsibility for equipment handled.
- ❖ Work conditions of the job.

<u>Merit Rating:-</u> Just as job evaluation determines the relative worth of jobs, merit rating determines the relative worth of each worker. Merit rating is a systematic evaluation of the personality and performance of each employed by his supervision or some other qualified persons. It is a system by which the performance of an employee is objectively evaluated and compared with that of other in his work group. The various qualities taken into consideration while rating the workers included the following:

- ❖ Ability to do the work.
- ❖ Knowledge of the job.
- ❖ Work habits and personal characteristics.
- ❖ Initiative and responsibility.
- ❖ Supervisory abilities.

Q 30. **What are the merits and demerits of time rate and the piece rate system of wage payment ? State the situations in which each system is effective and useful.**

Ans. **<u>Time rate system</u> :** In this system time is made the basis of payment. Labour is paid for the time worked irrespective of the volume of production during that time. The formula for calculating wages under this system is:

Wages = Hours worked $\times$ Rate per hour.

<u>Advantage of time rate-system:-</u> The main advantages of time system are**:**

- ❖ The system is simple and calculation 0of wages is easily understood by the workers.
- ❖ The worker avoids over-speeding and trends to concentrate on quality.
- ❖ The remuneration under this system is certain and workers have a feeling of security.

<u>Disadvantages of time rate-system</u>:- The main disadvantages are:

- ❖ If offers no positive inducement to workers to improve performance.
- ❖ It does not distinguish between efficient and inefficient workers.
- ❖ It trends to increase labour cost per unit because of low productivity.

<u>Suitability of time rate-system:-</u> Time wage system is suitable for the following type of situations:

- ❖ Where quality of work is more important than quantity, e.g. high class tailoring.
- ❖ Where output cannot be measured in quantitative terms.
- ❖ Where output is beyond the control of worker.
- ❖ Where work is being done in a small scale so that close supervision is possible.

<u>Price rate system:-</u> Under the price rate system, a worker is paid a fixed amount per unit produced without any regard to the time taken. A rate per unit of output is fixed and earnings are calculated as under:

Wage = Number of units produced $\times$ Rate per unit.

<u>Advantages of piece rate system:</u>

- ❖ It acts as an incentive to workers to produce more as the remuneration is in direct proportion to workers effort.
- ❖ Because of high production, overhead per unit is also reduced.
- ❖ It simplifies costing because labour cost per unit is easily known in advance.
- ❖ The method is simple and easily understood by workers.

<u>Disadvantages of piece rate system</u>:

- ❖ To maximize earnings, sometimes substandard quality of good is produced by workers.
- ❖ In there efforts to maximize output, workers may cause excessive wastage of materials, mishandle and damage machinery and tools.
- ❖ The system is usually opposed by trade as it creates greed and unhealthy rivalries.

<u>Suitability:-</u> The piece Rate system is suitable:

- ❖ Where the output of individual workers can be easily measured**.**

- ❖ Where work is of standardized and repetitive in nature.
- ❖ Where there is an urgent need to increase the volume of production.

Q 31. **What do you understand by "Incentive to Workmen"? What are the principal of a good incentive scheme? Discuss the advantages of incentive scheme**.

Ans. An incentive may be monetary, i.e. cash benefit, or non-monetary. It may either be individual to every worker or collective to a group of workers. The primary purpose of incentive wage plan is to induce the worker to produce more, and by producing more to secure a higher wage while saying in production cost per unit. Any incentive scheme should encourage the workers put in their best on their jobs.

Principal of a good incentive scheme:- A good incentive scheme should have the following principles:

- ❖ The scheme should be simple and easily understandable by workers so that a worker should be avail to calculate his own wage easily.
- ❖ The scheme should be fair to both employer and employee.
- ❖ The cost of operating the scheme should be reasonably low.
- ❖ The standard of performance should be scientifically set and should be within the reasonable reach of an average workers.
- ❖ The scheme should have the approval of workers and the union.
- ❖ No worker should suffer a reduction of earnings for factory beyond his control such as machine breakdown, power5 failure, etc.
- ❖ The scheme must be relatively permanent and should not be allowed to change every now and then.

Advantages:

- ❖ It leads to an increase in production, which result in cost reduction.
- ❖ It is beneficial to employers, employees and customers.
- ❖ It helps to reduce labour turnover.

Disadvantages:

- ❖ It needs careful consideration in fixing standards and sitting rates which involve extra work, time and expenditure.
- ❖ It is difficult to withdraw a scheme once it is introduce if it is uneconomic and weak from the point of view of management.
- ❖ As the scheme needs the approval of a union for its success, sometimes it becomes a source of friction which may lead to strikes and affect morale in the organization.

Q 32. **Write short notes on-**

a. Profit sharing and co-partnership.
b. Non-monetary incentives.

Ans. **a. Profit sharing and Co-partnership:**

Profit-sharing: Profit-sharing schemes are those where there is an agreement between the employer and his workers whereby the employer agrees to pay to workers in addition to their wages, a share of profit at an agreed rate. This scheme is based upon the principle that every worker contributes something towards output and profit.

Co-partnership: This means that workers shall own the business jointly with the shareholder. In other words, workers are given the opportunity to have share in the capital of business and to receive the profits accruing to their share.

Profit sharing and co-partnership based on the premise that workers contribute towards the profit of the organization served by him and allowing him to participate in the profit or the capital of the undertaking so that, they take keen interest in the business activities and improve industrial relations.

Non-monetary incentives: these incentives are given in the form of better inanities or facilities. They are related more to the conditions of employment than job. These incentives do not form part of workers' pay packets but the provision of which by the employer serves as stimulants to workers to improve their performance. The objective of such incentive is to make condition of employment more attractive and beneficial to the employee. Explains of such incentives are:

Q 33. **What are the fringe benefits admitted to the workers in a factory? How are the expenses on such benefits charged to cost of production?**

Ans. Industrial workers usually enjoy certain benefits in addition to their wages, salaries and other allowances. These benefits, known as fringe benefits, are costs incurred by the employers, which are not related to the quantity of work done by workers. These can be monetary as well as non-monetary. Lots of such benefits are as below:

Fringe benefits **–** individual – monetary

- Dearness allowance
- Night shift allowance
- Sick pay
- Holiday pay
- Gratuity, pension
- Provident fund.

Fringe benefits – group – non – monetary

- Subsidized conveyance
- Subsidized canteen facilities
- Educational facility
- Medical care
- Free housing

Inclusive cost of employing each worker should be calculated after taking into account various elements of remuneration, contribution to P.F., other benefits. Inclusive cost should be charged to the unit of production on appropriate basis.

As regards expenditure on non-monetary benefits, it should be aggregate and allocated over departments on the basis of quantum of benefit received.

Q 34. **What is group bonus ? What are its objectives?**

Ans. **Meaning:** Group bonus refers to the bonus paid for the collective efforts made by a group of workers. Such a scheme is introduced generally when individual efficiency cannot be established/measured for the payment of bonus. The quantum of bonus is determined on the basis of productivity/ output of the tam as a whole. Bonus is shared by the individual workers in specified proportions e.g. on proportions of time based wages.

Objectives of group bonus schemes: The objectives of a group bonus scheme are:

- ❖ To create collective interest and team spirit among workers.
- ❖ To create interest among supervisors to improve performance.
- ❖ To reduce wastage in materials and idle time.
- ❖ To achieve optimum output at minimum cost.
- ❖ To encourage individual members of a team, where only the output of the team as a whole can be measured.

Q 35. **What are the principals of good remuneration system?**

Ans. The following are accepted principles of remunerating workers:

- ❖ It should be on par with the industry standards and in conformity with the general wage –levels prevailing in the locality.
- ❖ It should be same for work or jobs involving similar efforts and skill. [i.e. equal pay for equal work]
- ❖ It should be related to the degree of skill, efforts, initiative and responsibility of the employee.
- ❖ It should be reasonable to workers and guarantee them a minimum wage, regardless of their efficiency.
- ❖ It should enable workers to maintain a reasonable standard of living.
- ❖ It should enable the workers to increase their earnings by making extra effort and by increasing output. As far as possible, there should be no maximum limit for his earnings.

Q 36. **Define casual worker and out worker.**

Ans. Casual workers are those workers who are not on the list of regular employees but are engaged casually whenever there is extra workload in the factory or whenever the regular worker is absent from the job for a temporary period because of illness or any other reason**.**

Outworkers are those workers who outside the factory premises.

These workers may be-

- ❖ Those who are not in regular employment. They are supplied material for execution of work at their own premises**.**
- ❖ Those who are in regular employment. They are sent to perform some specific duties at customer's premises or at any other place as per the directions.

Q 37. **Distinguish between production Account and cost Sheet.**

Ans.

- ➢ Production Account is based on double entry system, whereas cost sheet is not based on double entry system.
- ➢ Production Account Shows the cost in aggregate and thus, facilitates comparison with other financial accounts. Cost sheet shows the cost in detail and analytical manner, which facilitates the comparison of cost for control.
- ➢ Production Account is not useful for preparing tenders or quotations. Estimated cost sheets, which are prepared on the basis of actual cost sheets, are useful for preparing tenders or quotations.

CONTRACT COSTING

Q 38. Write short note on:

- Contract Costing
- Cost-Plus Contract
- Escalation Clause
- Sub-Contract

Ans.

- **Contract Costing:** This type of costing technique is adopted in case of big job. This costing technique is adopted by builders and civil contractors engaged in construction. Under this method, a separate account is prepared for each contract for calculating profit or loss from each contract.
- **Cost-Plus Contract:** In these types of contracts, the contract price is ascertained by adding a percentage of profit to the total cost of the contract. This method is adopted in those cases where is not possible to compute the cost in advance with a reasonable degree of accuracy due to unstable conditions. In these contracts, it is provided in the agreement about the items of cost that may be allowed and the percentage of profit to be added. Hence, the contractor is also assured of a fair return. The contractee has the right to verify and inspect all documents related to the expenditure on contract.
- **Escalation Clause:** This clause is provided in the contract as a safeguard against the likely changes in the prices and actual utilization of materials and labour. If during the period of contract the prices of material and labour rise beyond a certain limit, the contract price will be increased by an agreed amount. The inclusion of such a term in the contract is known as escalation clause.
- **Sub-Contract:** Sometimes the contractor may not find it feasible to do all the work himself. In such a cases, he may entrust some portion of the work to another who is called a Sub-contractor and the work allotted to him is known as sub-contract. The sub-contractor is accountable to the main contractor. The costs of sub-contract are treated as direct costs of the contract.

Q 39. **Job costing Vs Contract costing?**

Ans. Contract costing differs from job costing in the following respects:

- The number of jobs undertaken at a time is usually large as compared to number of contracts because contracts are generally much bigger in size.
- Allocation and apportionment of overhead costs is simpler in contract costing as compared to job costing.

- Contract is generally big while job is small. It is well said," a job is a small contract and a contract is a big job."
- Jobs are usually carried out in factory premises while contract work is done at site.

Q 40. **Features of contract costing?**
Ans. Contract costing usually shows the following features:

- Contracts are generally of large size and, therefore, a contractor usually carries out a small number of contracts in the course of one year.
- A contract generally takes more than one year to complete.
- Work on contracts is carried out at the site of contracts and not in factory premises.
- Each contract undertaken is a cost unit, A separate contract account is prepared for each contract in the books of contractor to ascertain profit or loss on each contract.