

MATERIALS

MANAGEMENT

Contents

SN.	Subject	Page Nos.
1	Introduction	3-10
2	Classification of stores	10-12
3	Standard Nomenclature Lists	12-14
4	Requisitioning and Distribution of Stores	14-16
5	Recoupment	16-18
6	Purchasing	18-21
7	Receipt & Inspection of Stores	21-22
8	Returned Stores	22-23
9	Surplus Stores	23
10	Inventory Control	23-25
11	Scrap Disposal	26-29
12	Import	30-38
13	Introduction to Supply Chain Management	38-40
14	Question Bank	41-54

1.0 Introduction

1.1 General: For running any industry or business, we need a number of resources. These resources are popularly known as five M's of any Industrial activity i.e. Men, Machines, Materials, Money and Management. All these resources, which are basic inputs, are important but their relative importance depends upon the particular type of industry and also other environmental factors. Earlier, when many modern machines were not even known, whole activity was centered around one source, the men. But now the importance has by and large shifted from "men" to "machines" and in the recent environment, materials are the life blood of any industry or business and for their proper running, materials should be available at proper time in proper quantity at proper place. Such compelling considerations have led to holistic management concepts like Supply Chain Management.

1.2 Profitability: Basic goals of any industry are survival and earning profits to make adequate returns on capital employed (Investment). The profitability of any organization can be judged by a ratio known as "Rate of Return on Investment", which is defined as profit earned per unit of investment-

$$\text{i.e. Rate of Return (ROR)} = \frac{\text{Profit}}{\text{Capital Employed (Investment)}}$$

$$\text{ROR} = \frac{\text{Total Receipt (Revenue)} - \text{Total Expenditure}}{\text{Fixed Assets} + \text{Current Assets}}$$

Different strategies for improving profitability (ROR) may be as under:-

(i) To increase total receipts: For this either sales have to be increased or the prices of the products sold have to be increased. Both these alternative are very difficult to achieve in present competitive market.

(ii) To reduce Expenditure: Majority of the expenditure of any industry is either on men or materials. The relative expenditure on men and materials vary from industry to industry but in most of the industries' expenditure on materials is 45% to 70% of total expenditure. Therefore, two broad areas for reducing expenditure are men and materials. However, reducing expenditure on men is a very difficult task in today's environment of tight labour laws and strong trade unions. Therefore the other area to be tackled remains reducing expenditure on materials. When we talk of expenditure on materials, it is relevant to point out here that there are two types of costs related to materials- "cost of materials" and "cost on materials" i.e. there is always some extra expenditure related to materials which is not actual cost of materials. It needs to be appreciated that we can very well tackle these extra costs (cost on materials) without

compromising the actual level of service (consumption) and achieve reduction in expenditure.

(iii) Reduce investment in fixed assets: As investment has already been made, there is very little scope for reducing expenditure on fixed assets.

(iv) Reduce investment in Current Assets: Current assets consist of mainly working capital and inventory. As a rough estimate, about 40% of current assets are generally tied up in inventories of raw materials, consumables, materials under different stages of production and finished goods. If we could reduce stocks of these different types of inventories, we can very well reduce investments in current assets and improve profitability.

1.3 Functions of Materials Management Department

(i) Planning: For materials there is invariably a need for planning. Apart from day-to-day activity a materials manager keeps a watch on the future activities of the organization, which may call for specific items' procurement in turn. Planning plays a very important role in assessing the quantity of the material, funds availability for purchase/procurement and selecting the right source for supply.

(ii) Procurement / Purchasing: Procurement of an item does not necessarily mean purchasing. An item may be manufactured in the workshop or may be got transferred from another place as available. Alternatively, the item may be purchased from the market. There are two basic types of purchasing in business world - Purchasing for re-sale and purchasing for manufacturing or consumption. In our organization we are basically concerned with purchasing for manufacturing process or for consumption for maintenance and repair work.

(iii) Warehousing (Store-keeping): To make materials available when required and to avoid stoppage of work, it becomes necessary to maintain adequate stocks of a large number of items. It involves a considerable amount of planning to decide the items to be stocked, the locations where these stocks are to be maintained, such as warehouses (stores depots), stacking arrangements and handling equipments etc. to be provided. The procedure for receipt, inspection, issue and accountal of materials and so on have also to be in place. Proper methods of stocking and "preservation techniques" are to be thought of. In manufacturing organizations arrangements of warehousing are to be made not only for raw materials, spares and consumables but for finished products and partly processed materials as well.

(iv) Inventory Control: To maintain stocks of materials at the correct level is a tricky problem. For giving better services and to get price advantage it may be necessary to buy in bulk (Economy of scale). But this may mean blocking of substantial amount of money and the inventory carrying costs also go up. If we buy very frequently, cost of ordering goes up. In addition we may not get the quantity discounts. The risk of materials not available when required and the consequent additional costs to the

organization, have to be kept in view. Inventory control therefore, involves designing and following such policies, which will minimize sum total of various costs (the inventory carrying cost and ordering costs) related to materials in an organisation. Inventory control calls for right quantity, right quality, at right price from right source, at right place, at right time.

(v) Surplus / Obsolete / Scrap Disposal: During the process of manufacturing, production, track renewals and gauge conversion etc. Railways generate large quantities of scrap, collection and disposal of which also is a big task.

(vi) Distribution: Transportation and distribution of raw materials, spares, consumables as well as finished products is an important activity as it involves substantial costs. Efficient & responsive distribution system is very necessary for giving a good service. In the Railways, we are basically concerned with distribution of raw materials, spares and consumable, as the finished product is not in the material form but in transportation service itself. Movement of material for Railway indenters may be by Road Transport, wagons, parcel vans, per bearer etc.

(vii) Value analysis and cost reduction: Value analysis talks about value of an item in use, in terms of primary function and cost of the material to achieve the function. It is possible to keep the primary function of the product unchanged and reduce the cost of the material. Value of an item can also be increased by increasing the function and keeping the cost as unchanged. Value analysis may be gainfully applied for high annual usage value items like "A" category items, further details of which are available in subsequent para.

1.4 Objectives of Materials Management Department

- (i) Ascertaining the needs of various departments in the matter of Stores and materials.
- (ii) Preparing a correct estimate of the quantities of stores to be purchased or manufactured in Railway workshops each year.
- (iii) Obtaining stores of the desired quality at competitive prices.
- (iv) Ensuring supply of stores in the required quantity in the most efficient, economical and expeditious manner.
- (v) Maintaining an economic level of investment in inventories.
- (vi) Receipt, inspection, stocking and distribution of stores to the various consuming points as and when required.
- (vii) Identifying and arranging disposal of scrap and other obsolete material within the shortest possible time to the best advantage of the Railway.
- (viii) Developing ancillary industries and indigenous sources of supply to replace imports and
- (ix) Maintaining a constant touch with the market to ensure steady flow of material.

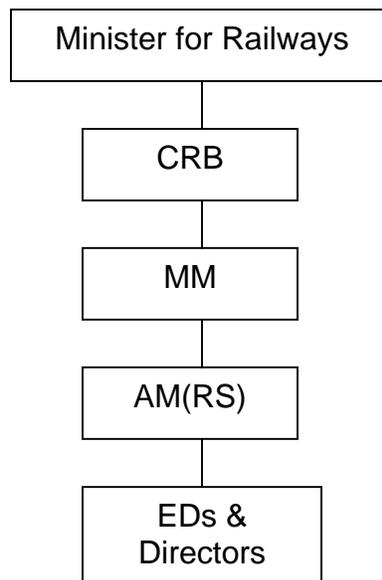
1.5 Organisation of Stores Department: The Indian Railways net work is owned and managed by the Central Government. Operations are controlled and directed by the

Railway Board under the over-all supervision of the Minister of Railways. The network of Railways is divided into 17 zonal railways each under the control of a General Manager. Each Railway zone is organized on the divisional pattern of working.

In addition there are modern Production Units- viz. Chittaranjan Locomotive Works, Chittaranjan (Electric Locomotives); Integral Coach Factory (Integrated coaches), Chennai ; Diesel Locomotive Works (Diesel Locomotives), Varanasi; Rail Wheel Factory, Bengaluru; Diesel loco Modernisation Works, Patiala; Railway Coach Factory, Kapurthala.

On a Zonal Railway, General Manager is assisted by Additional General Managers and Heads of different departments such as Controller of Stores, Chief Engineer, Chief Optg. Mgr., Chief Comml. Mgr., Chief Mech. Engineer, etc.

1.5.1 Materials Management Organisation in Railway Board



(Fig. I)

In Railway Board, Member (Mechanical) looks after the materials management function and Additional Member (Railway Stores) is the head of Railway Stores Directorate.

There are Executive Directors, Directors/Joint Directors and Deputy Directors in this Directorate.

The functions of Railway Stores Directorate in Railway Board are summarized below:-

(a) Policy Formulation: For efficient materials management on Railways, the directorate frames and issues policy guidelines to all Zonal Railways and production units on stores and purchase matters including coordinating various activities related to materials management.

(b) Inventory Control: Railway Board evolve policies for efficient inventory management of Indian Railways. For this, integrated materials budget is processed by this Directorate. They also monitor inventory performance of Railways and production units by getting periodic returns from the Railways and issue directives from time to time.

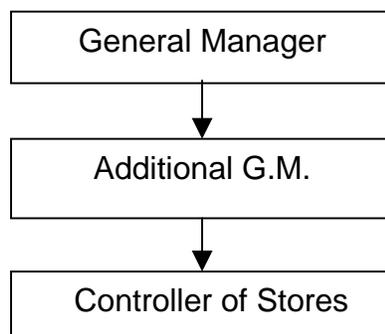
(c) Centralized Purchase: Railway Stores directorate also handles high value purchases. Some of the items are centralized for purchase through Railway Board only:-

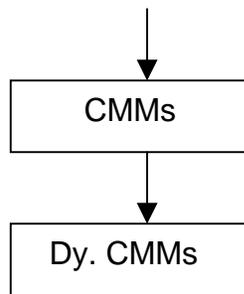
- Complete units of Rolling Stock,
- Wheel, Tyres & Axles (WTA) including Imports,
- Petroleum products including oils and lubricants (POL),
- Selected critical items for which manufacturing capacity is less than Railways' demands. These items are centralized for purchase through Railway Board to ensure equitable distribution as per needs of Railways e.g. Composite brake blocks, special steel and
- Processing of all cases initiated by Zonal Railways where the purchase is beyond the competence of General Manager i.e. costing more than Rs. 50 crores per item.

(d) Liaison with other Ministries: Some of our purchases are being done through Directorate General of Supplies and Disposals. In cases of imports, sometimes we may require clearance from Ministry of Industry and DGFT. To maintain good liaison with DGS&D and other Ministries, Railway Stores Directorate has posted one JA/SG Grade officer in Board who is designated as Railway Liaison Officer (RLO).

(e) Coordination for supply of steel: For ensuring continuous supply of steel from main producers to various Railways and production Units, Railway Stores Directorate has posted one Director at Kolkata who coordinates with steel plants in drawing Rolling programme and monitors supply of steel to various Railways and Production Units. Director (Iron & Steel), Kolkata also plans and coordinates supply of steel to various wagon builders.

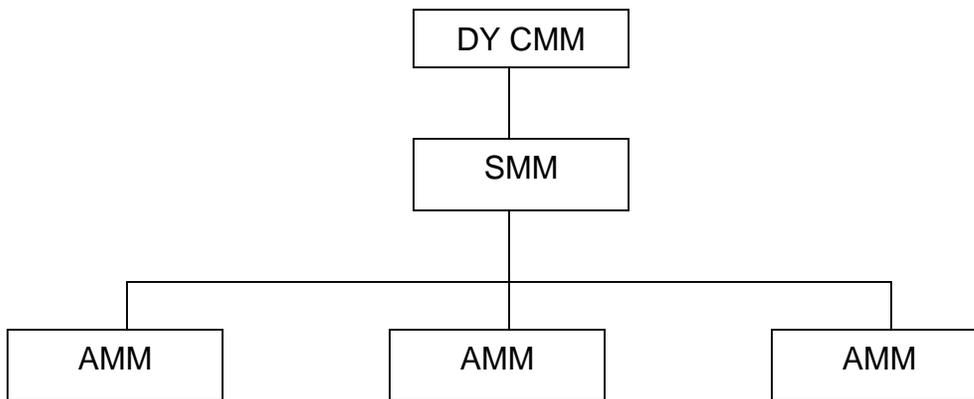
1.5.2 Materials Management Organisation at the Zonal and Depot level





(Fig. II)

The problems on Railways are more complex than those of a manufacturing organisation as there are thousands of indenters spread over a large geographical area. The Railways, therefore, have to plan locations of various warehouses (Stores depots) with care. Normally, stores depots are located adjacent to major workshops and are known as attached depots. In addition, stores depots for materials of general nature that are required by most of the indenters are situated at one or more locations from where the supplies can be affected. These are called General Stores Depots.



(Fig. III)

Stores Depots are generally under the supervision of gazetted officers of the stores department referred to as Depot officers. A Depot officer is responsible to the Controller of Stores for efficient maintenance of stock of stores and for prompt service to the indenters in his territory. The depot officer is assisted in his work by Assistant Depot Officers and other senior staff viz. Depot Material Superintendents (DMS).

The work in a Stores depot consists of –

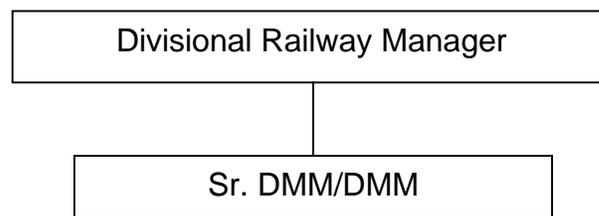
1. Receipt and inspection of stores
2. Storage and issue of materials
3. Dispatch of materials
4. Disposal of surplus stores and scrap materials.

The depot is divided into different wards and sections for stocking different types of materials and to deal with the work mentioned above.

The purchase function is centralized in the Zonal Headquarters i.e. the office of the Controller of stores except for items of small value those can be directly purchased by the executive officers and the depot officers. The Controller of Stores is assisted by Chief Materials Managers (CMMs) and Dy. CMMs. Dy. CMMs are administrative in-charge of different purchase sections as well as stores depots. The purchase sections are under the charge of purchase officers in different grades called Senior Materials Manager and Assistant Materials Manager.

The function of inventory control is basically a part of every stocking organisation. For evolving suitable policies and monitoring the progress a separate cell named inventory control cell exists which functions in the headquarters under the Controller of Stores.

1.5.3 Organization at Divisional level



(Fig. IV)

(a) Administrative and Technical Control of Sr. DMM/DMM: As with other branch officers, the Divisional Materials Manager (DMM) works under the administrative control of the DRM in respect of day-to-day working. For technical and procedural matters, DMM is directly responsible to COS and nominated CMM/Dy.CMM.

(b) Duties of Divisional Materials Manager:

(I) Ensuring availability of Materials: The Divisional Materials Manager should monitor availability of imprest and non-imprest items, vital/safety/passenger amenity items besides tickets, stationery and forms. He should also monitor expeditious receipt of non-stock items, requisitioned through him.

(II) Ensuring economy in use of materials and making users aware of the need of such economy: With a view to controlling any wasteful and un-warranted

consumption of material and also to keep the consumption of material within the budgetary provisions, he should take adequate steps.

(III) Review of sanctioned imprest: Regular inspection of the stocks available with imprest holders should be carried out by the Divisional Materials Manager to ensure that the imprest limits are realistic and are regularly reviewed/revised wherever necessary. The excess stocks should also be identified during such visits for further redistribution in the Divisions and, if necessary, to other Divisions or for return to the feeding stores depot.

(IV) Local Purchase: It should be ensured that stores are purchased at reasonable rates and following precautionary measures are taken during local purchase of stores-

- (i) Scrutiny of firms (Likely suppliers)
- (ii) Formation of approved list of suppliers, issue of bulletins etc.
- (iii) Local purchase as per the laid down procedure
- (iv) Physical verification of material on its receipt, before it is ultimately handed over to the consumer.

(V) Distribution of material from Stores Depots:

- (i) Monitoring and ensuring smooth movement of material within the division.
- (ii) Attending the Divisional Control Room from time to time to monitor the movement of material and sort out problems, if any by coordinating with concerned branch officers.
- (iii) To plan, develop and head the Divisional Stores Depot to be created in near future.
- (iv) Transportation and distribution of materials by road transport within the divisional jurisdiction.
- (v) Storage and distribution of direct delivery items.
- (vi) Identification of bulk items for storage within the Division for continuous availability so as to improve service levels.
- (vii) Co-ordination with feeding depots for timely distribution of stock items to consuming points.

(VI) Scrap Generation and Disposal:

- (i) Identification and monitoring of scrap disposal on the division with a view to expedite the same.
- (ii) Assisting the Auction Conducting Officer in organising public auction for disposal of scrap including proper security as well as arrangement for collection of cash towards security deposits during auction.
- (iii) Monitoring progress of return of scrap to nominated depot.
- (iv) Disposal of low value items like waste paper, empty drums, etc.
- (v) Coordinating deliveries of sold line scrap within the division and attending to complaints and submission of completion reports.

- (vi) Monitoring payment of Sales tax/Commercial tax, etc. to State Authorities by Sr.DENs on the scrap sold from the sites wherever such taxes are payable.

1.6 Stores Depots

For facility of work, there should ordinarily be (i) A locomotive depot attached to serve the main Loco workshop (ii) C&W stores depot attached to C&W shops (iii) Signal Stores Depot attached to Signal shops (iv) Electrical Stores Depot attached to Elect. Shops (v) P. Way depot for stocking P. Way & Bridge material (vi) Stationery depot (vii) Scrap yard (viii) General Stores Depot (ix) Electric Loco Stores Depot (x) Diesel Loco Stores Depot (xi) Printing Stores depot attached to Railway Printing Press.

2.0 Classification of stores

All materials are basically divided into two broad categories viz. Stock and Non-Stock. The stock items are those items for which there is a regular demand, regular drawl or consumption and there is a regular recouplement. Non-stock items are required occasionally and not on regular basis. The Stores Department is required to give a service of making thousands of items available to the indenters when required. There are approximately one lakh eighty thousand such items all over the Railways stocked in 259 stores depots. To give this service we have to maintain stocks of a large number of items known as "Stock items" whereas for other items, which are not frequently required or having one time requirement, no stocks are maintained. These items are purchased as and when required to meet specific demands and are called "Non-stock items". The stock items are classified further as under.

2.1 Ordinary Stores: These are generally such items of stores for which there is a regular turn over caused by a constant demand.

2.2 Emergency stores: The stores depots are also required to stock certain items of stores even though they do not have a regular turn over. These are emergency stores and comprise of items which do not ordinarily wear out or require renewal but which are required to be kept in stock to meet emergency due to breakage or unanticipated deterioration. These items are not readily available in the market and as such would require a long time for procurement in case they are not stocked.

2.3 Surplus Stores: Stores, which have not been issued to any user for past 24 months or more, are classified as Surplus Stores. These are of two kinds- 'Moveable surplus' and 'Dead surplus'. Initially they are classified as Moveable surplus but if no use is anticipated on any railway in coming 24 months the items are classified as Dead Surplus which are to be disposed off.

2.4 Special Stores: The items of stores required for works and other special purposes i.e. other than for 'operation' or 'ordinary maintenance and repairs' are called

"Special Stores". Generally such items are dispatched directly to the users without being stocked in a stores depot.

2.5 Custody Stores: Stores which have been purchased for special works and charged to such works but left in the custody of stores department are called custody stores. These stores chiefly consist of items obtained for the mechanical department for construction of rolling stock sanctioned under the capital or revenue programme. Directly the stores are received and paid for, the cost is at once debited to the works concerned. Instead of the stores lying in the workshops until they are required, the stores depot should keep them in safe custody, proper numerical records being maintained by it.

2.6 Inactive stores: Items which have no issues for last 12 months, and stocks exists are called inactive or non-moving items. It is left to the reader to think what will happen if all items required by the railway are made as stock items or all the items are made as non-stock items.

2.7 Imprest Stores: These items are required for day-to-day operation of services and maintenance of the activity. Imprest stores may be either charged off stores or may be kept in capital account head also. Certain important units like loco sheds, TXR depots etc. require a large number of items for day-to-day repeat use, maintenance and operation of rolling stock, etc. Such items include consumable stores like cotton waste, oils, greases etc. as well as the spares required for rolling stock. The senior supervisor in-charge of the unit like running sheds, train examination depots; Chief Signal Inspector, Electric Foreman etc. are allowed to maintain stocks of nominated items of stores for this purpose. These stores are called imprest stores. The limits up to which the stocks are to be kept are also specified while sanctioning such items and are generally fixed as 2 or 3 months requirement. Imprest stores is like a standing advance of materials to meet the day-to-day requirement of repairs, maintenance and operation of rolling stock etc. On most Railways the imprest stores are charged off to the final head of account under revenue working expenses. However, these units maintain detailed accounts and monthly imprest schedules are sent by the imprest holders to the nominated stores depot for bringing their stocks to the sanctioned imprest levels. This system of imprest stores is useful in ensuring continuous availability of items, which are important and regularly required for day-to-day maintenance and operation. In case of non-compliance of demand for imprest stores, it lapses whereas for ordinary requisitions, the demand is kept pending for compliance as and when the material is received.

3.0 Standard Nomenclature Lists

The details of all items having possible use on Indian Railways are contained in booklets known as nomenclature lists. These books contain complete and unambiguous description of items, their code numbers (Known as Price List Numbers or PL Nos.), Specification or Drawing No., the unit of transaction and the depots on various Railways where the item is stocked. These details are elaborated further as under:

3.1 Complete and unambiguous description: The description of each item should be framed in such a way that it does not give rise to different interpretations. The objective behind is that the user should know what exactly he wants, the purchase officer should know what exactly is required to be purchased and the supplier in turn should know what is to be supplied. Otherwise the same item could be stocked at different places under different headings, e.g. washers being called as rings, washers, bushings, collects, grommets, spacers, etc.

3.2 Describing an item: The basic commodity method has been adopted in describing an item. In this system the basic commodity precedes the detailed description of the item. For example " Ordinary toilet soap" would under the method be described as "Soap, Toilet, Ordinary".

The basic commodity is soap. The word "toilet" specifies the kind of that commodity and "ordinary" further qualifies the toilet variety. If the basic commodity method is not used, the different kinds of soaps will find themselves listed in different places. In short the description should be arranged in the following order of precedence:

1. The mention of the basic commodity
2. The general variance in kind, use, size or shape
3. The particular kind or size.
4. The specification/drawing.

A few instances of how the items would have been described in these books are:

Item description	Nomenclature book
Brass plated spirit level	Level, Spirit, brass plated
Taper shank twist drill	Drill, twist, taper shank

Once the items are properly described they would be arranged in their alphabetical order.

3.3 End use of items: In some books the purpose for which the item is used is also incorporated in the nomenclature list. For instance there are numerous grades of lubricating oils stocked and used for various purposes. This information is briefly

mentioned in the nomenclature not as a part of the description but say in remarks column - as this will greatly help the consumer.

3.4 Mention of makers name: The commercial brand or the proprietary make of the item will be avoided in the description. Rather than make or commercial brand, we need to mention specification and drawing reference for clarity.

3.5 Specification or drawing: Reference to a standard specification or in its absence the Railways drawing if any will be mentioned against each description. Specification and drawing references are not only useful to suppliers, including Railway manufacturing shops but also assist the Stores department in the purchase as well as inspection of supplies.

3.6 The unit: It is desirable that for each item all transactions should be in one and the same unit. This will avoid unnecessary references for clarifications and would also facilitate correct issues and receipts eliminating arithmetical errors in conversion from one unit to another. Some of the unit codes have been indicated as under:

01 = Number, 02 = Pair, 03 = Set, 13 = Kilogram, 14 = Quintal, 15 = Metric Tonne, 22 = Metre and so on.

3.7 Material Code (P.L. No.): In order to recognise every item distinctly, each item appearing in the nomenclature book has been allotted a code number, which is also known as Price List number. These numbers enable unique identification of stock items and as a result of extensive standardisation all over the Railways, easy exchange of information on each item among the Railway Zones and Production Units is possible. While allotting these numbers, an opportunity has also been taken to group the items in a meaningful manner, so that group wise analysis of materials is also facilitated. Each stock item will have a unique PL number.

All stock items are having PL numbers but all PL numbers are not necessarily stock items. Unified lists are common to all Railways and facilitate easy exchange of information between the Railways. Disposal of Surplus Stores and Centralised Purchase becomes easier. In addition to PL no., depot, Unit, Vendor, Consignee etc. are also codified.

3.8 Eight digit coding of PL numbers (Semi Significant System):

**	**	***	*
A	B	C	D
MAIN GROUP	SUB GROUP	SERIAL No.	CHECK-DIGIT

Part "A" consists of two digits representing the Main Group of stores to which an item belongs.

Part "B" consists of two digits representing Sub Group. Each Main group has been divided into several sub groups. The sub grouping for most of the rolling stock groups is on the basis of major assemblies of which the item is a part e.g. brake fittings, under frame, engine block, etc.

Part "C" consists of 3 digits and it is the Serial Number of the item. No significance is attached to this number.

Part "D" is the last digit, which has a special significance with reference to computerisation. This is the Check Digit. This digit is unique to a given number and it is intended to check the integrity of the number. Whenever the Computer encounters a code number during processing, it calculates the check digit on the basis of Modulus 11 and checks if the calculated digit tallies with the check digit shown in the document punched. If the two do not tally the voucher is rejected.

4.0 Requisitioning and Distribution of Stores

4.1 Placement of requisition: All issues from a Stores depot are made on written requisitions on the prescribed form by the indenter. These should be signed by a gazetted officer except imprest schedules. There are following types of forms in use:-

- (1) Recoupment schedule for imprest stores (Form No. S -1830)
- (2) Combined requisition and issue note (Form No. S-1313)
- (3) Separate requisition form (Form No. S - 1302)

4.2 Points to be observed while placing requisition:

- (a) It is very necessary that an indenter when he wants to indent materials refers to the standard nomenclature list and or list of Stock items to ascertain if any of the stock items can possibly be used to serve his purpose.
- (b) Give correct code no.
- (c) Give correct description
- (d) Give correct specification /drg. with latest amendments, if any
- (e) Give correct quantity in unit of account as shown in nomenclature list.
- (f) Give correct Head of Account chargeable
- (g) Confirm availability of funds (Duly noting the same in Liability register) and finance vetting wherever necessary.
- (h) Give correct details of the consignee (who is to physically receive the material) and consignee code number.

4.3 Nominated depots: Booklet on guidelines to indenting departments, indicate items nominated to a certain depot. The requisitions on receipt in the nominated depot are scrutinised and registered. In case a non-stock item is demanded, the depot after

verifying should offer the nearest equivalent item that is stocked to the indentor, if it suits. If not, the requisition is forwarded to COS office for purchase and supply. Recurring demands are noted to make them Stock items.

Requisition for stock item is sent to the stocking ward. Requisition cum issue note is prepared in 6 foils by the indentor. Block copy is retained as office copy and remaining 5 copies are forwarded to the stores depot.

The stores depot sends two copies to the indentor along with material out of which one copy is returned back by the indentor duly acknowledging receipt of material. The other copy is sent by indentor to his divisional officer to compare with the copy sent by Accounts office with the summary of debits.

The two copies are sent by depot to the Accounts office for posting of which one is sent to the controlling officer of indentor along with debit summary.

One foil is retained as office copy in depot.

Separate requisition and issue forms are used for issue of material to workshops.

4.4 Distribution of Stores to the Indentors: On a zonal railway there are thousands of indentors situated all along the railway line, hundreds of kilometers away from the supply point. It is very essential that materials required by these indentors are received by them regularly to avoid any dislocation in their work.

The Railways Stores depots arrange distribution of these materials by one of the following methods: (i) Collection of materials by the representatives of the indentors- this is generally followed by the workshops where the stores depots are attached to the workshops. (ii) Delivery of stores by road through departmental or contracted private motor lorries for indentors situated nearby. (iii) Dispatch by rail parcels for consignments that do not form full wagon load. (iv) Dispatch of full wagon loads - This is generally resorted to when the demands are for quantities which will constitute a full wagon load for a consignee. (v) Through a stores line delivery system: Stores line delivery system is an important service run by the stores department so that every station on the entire railway system receives the supply of materials required by them. Materials are loaded station wise in the stores delivery vans and these delivery vans move from station to station as per a scheduled programme. The staff who accompany the delivery vans deliver the materials required at the station as well as collect certain items which are to be returned by the stations to the stores depots.

The advantages of the stores van service are safe service, less breakage and damage in transit, avoiding loss or pilferage in transit, reduction in cost of packing and collection of returned stores.

Due to aging of store vans and also due to rake load movement of traffic, it is becoming increasingly difficult to attach and detach the store vans very often. As such

small quantity of material to nearby indentors is being distributed by road transport. COS / CMM have been authorised to operate road contracts for the same.

5.0 Recoupment

5.1 Methods of Recoupment: There are three basic methods of Recoupment which are used on the Railway systems:

(i) Maxima- Minima System (EOQ / ROL System)

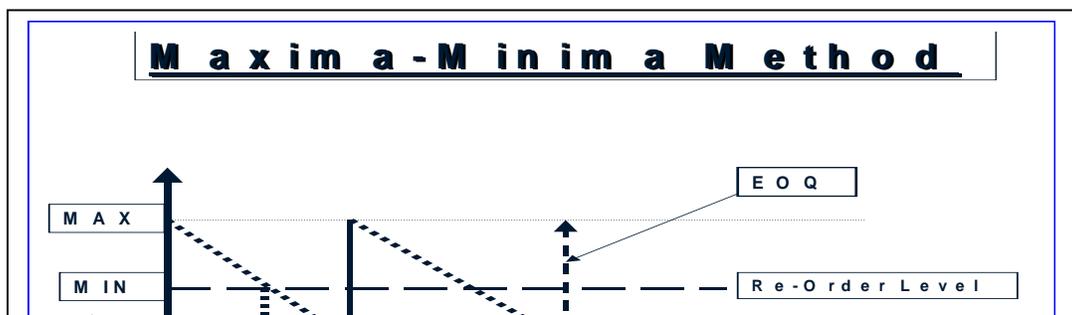
(ii) Annual Estimate System

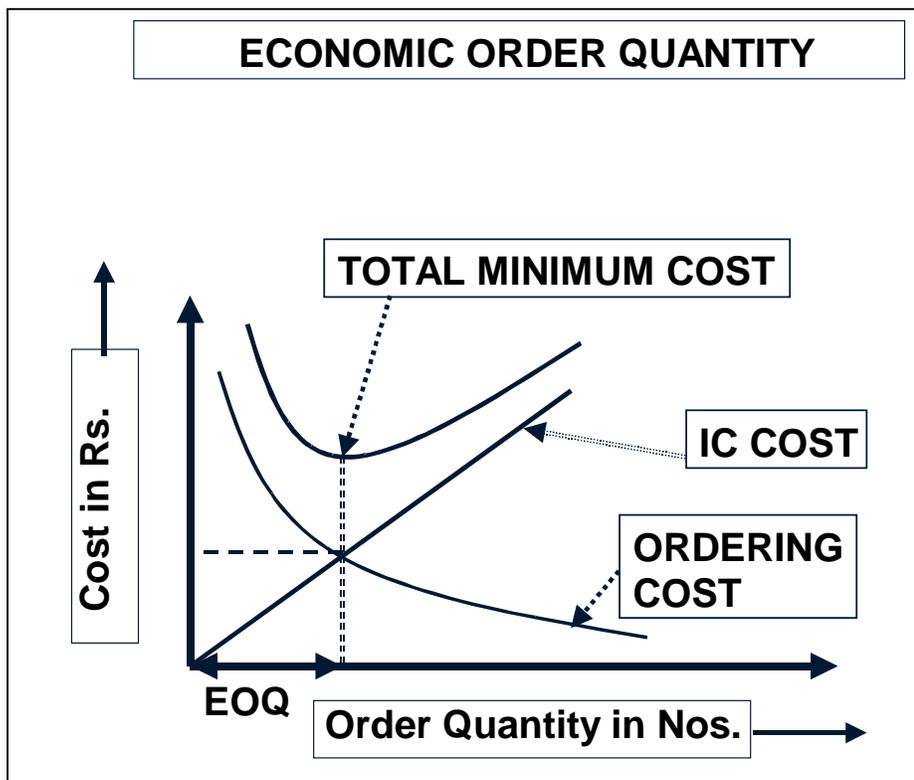
(iii) Fixing a level for emergency items and recouping the items to this level on every issue.

5.2 Maximum- Minimum System: The terms maximum and minimum have special meaning when used in this context. **Maximum** is the quantity, which is most economical to order at a time. If we order large quantities at a time, large amount of money will be blocked and inventory carrying cost will be higher. As against this, if we order small quantity at a time we will have to order more frequently and ordering costs will go up. Maximum aims at a quantity which tends to minimise the total costs. For high value items this quantity has been fixed as 3 months requirements where as for low value items it has been fixed as 12 months requirements.

Minimum- Every item needs certain time for procurement. The time required from the point recoupment is initiated till the point material is inspected and accepted is known as lead-time. It will be easy to appreciate that at the time of recoupment the stocks available (Physical stock plus quantities on order) should be sufficient to meet the requirement during the lead-time. This quantity of material is known as "Minimum". This is also known as "Re-order level" or "Re-order Point". In other words, Minimum or a Re-order level is fixed considering the lead-time consumption and any safety stocks or buffer stocks (B.S.) we decide to keep.

In the maximum minimum system, a perpetual record is required to be kept. As soon as the stocks plus dues touch the minimum level, Recoupment is made for the quantity equal to one maximum. In the Railways shop manufactured items and a few typical depot stock items are recouped on this system. Majority of items follow annual recoupment system. Buffer stock is provided to meet unforeseen fluctuations in lead-time as well as fluctuations in consumption patterns.





5.3 Annual Estimate System: In annual estimate system, a fixed timetable is followed for Recoupment of the items as against the maximum- minimum system where items are recouped as and when they touch the minimum level. The period for which items are recouped is fixed and is called "Contract Period". This contract period is generally 12 months. The interval between the dates fixed for sending the recoupment to the beginning of the contract period is known as the "Interim Period". For the purpose of convenience, different contract periods are fixed for different groups of items so that some groups are recouped in January, some in February and so on. This system is advantageous in that it is possible to combine the demands of different depots and make one purchase. This reduces not only the ordering cost but gives a better

bargaining power. Inventory carrying cost can be kept low if order is placed with required number of phased deliveries.

5.4 Recouplement of Emergency Stores: The special characteristics of emergency stores is that the demand is not regular. An upper limit or emergency limit is fixed based on experience. This limit can also be rationally fixed with the use of statistical methods. Every time there is an issue, the item is recouped to bring the stock to this pre-determined level.

5.5 Lead Time: The time taken from the date when the demand is registered to the date when the material is physically available for use is called lead time.

5.6 Buffer Stock: In spite of best calculations, there is a variation in lead-time and consumption pattern. To cater to the fluctuations of lead-time and / or consumption pattern, buffer stocks are required. It is generally one month to six months requirement depending upon the category of the item.

5.7 Purchase items & Shop manufactured items: While a very large number of items are purchased by the Railways, a substantial number of items particularly spare parts required for the rolling stock are manufactured in the Railway workshops by the Railways themselves. The manufactured items are recouped on maximum - minimum system. The maxima and minima levels are fixed in consultation with the Production Engineers who will be manufacturing and supplying the items. The work orders for manufacture and supply of items are prepared by the stores depots, when the minimum levels are reached. It is the responsibility of the stores depots to make the raw materials available for such manufacture.

6.0 Purchasing

The purchasing function is generally centralised in the headquarters office of the Controller of Stores. The recouplement or estimate sheets for stock items routed through the stores depots are received in the purchase office of the Controller of Stores for arranging procurement of all these items. The COS has full authority to scrutinize every demand, to question regarding quality of items and modify the quantities.

For small value purchases, however, the depot officers as well as Divisional Railway Managers have been delegated powers to do local purchase.

6.1 Agency for Purchase: Purchase of materials for Railway are arranged either as

- (1) Direct purchase by the Railway Administration
- (2) Purchase by the Railway Board, DLW, CLW, ICF, COFMOW, CORE

- (3) Purchase through the agency of Central Purchase organisation of the Government such as The Directorate General of Supplies & Disposals (DGS&D)

6.2 Direct Purchase by the Railway: Items which are not arranged by the Railway Board and items which are not required to be purchased through the Central Purchase Organisations are procured by the Railway directly through the Controller of Stores. The C.O.S. arranges purchase through –

1. Global tenders involving worldwide sources that generally require Foreign Exchange.
2. Advertised Tender or Open Tender (Generally for items valuing over Rs 10 lakhs). For finalisation, Tender committee recommendations (Tender committee consisting of a stores officer, a user deptt. Officer and an accounts officer at appropriate level) are put up to the competent authority depending upon the value of the case.
3. Limited Tender/ Bulletin tender to approved / registered suppliers for demands of value upto than Rs 10 lakhs.
4. Special limited tenders are issued if the value of the case is more than 10 lakhs and it is desirable to go for limited tender instead of Advertised Tender due to vital or safety nature of item or urgency subject to finance concurrence and competent authority's sanction.
5. Single tender if there is only one source of supply (PAC - Proprietary Article Certificate) or if the item is of very small value - from Cash imprest by Cash purchase or if any Emergency has arisen.

6.3 Stores Contracts: Stores contracts can be classified as - (1) Rate contracts (2) Running Contracts (3) Fixed Quantity Contracts.

Rate contracts: These are generalised contracts entered into with suppliers for specific items and identifying all terms and conditions including the price, but quantity and consignee are not identified /specified.

The contracts authorise specific orders being placed by nominated officers of Stores department for specific quantities, on the available terms, conditions and price without the need to go through the full procurement procedure. Thus, the rate contracts save lot of time in routine purchase work.

Running Contracts: These are similar to rate contracts, but here the quantities that can be ordered against specific orders are limited to a maximum quantity and minimum quantity.

Fixed quantity contracts: In these contracts, all terms and conditions including price, consignee and the quantity are identified at the first stage itself. Hence they are specific

even at the first stage. These contracts lack the flexibility of Rate and Running contracts.

6.4 Purchase by the Railway Board, DLW, etc : The requirements are consolidated in the COS's office and the indents are placed on centralized purchase agencies such as Railway Board, DLW, CORE, ICF etc. duly certifying the funds. The Railway Board mainly arranges the procurement of Rolling Stock complete units and POL including fuel. In addition Rails, fish plates, cast iron sleepers, wheels, tyres, axles, imported steel, certain nominated critical items like composite brake blocks, etc are procured by Board.

6.5 Purchases through DGS&D: If DGS&D have entered into a rate or running contract, the railways are required to use the agency of DGS&D for such items.

6.6 Tender finalisation: The tenders are to be decided to either accept the suitable offer out of all the tenders received or reject or file them. All the tenders in which acceptable offer is less than or equal to Rs 10 lakhs can be decided by the respective purchase officer as per the purchase powers delegated to him but, if the acceptable offer is valuing more than Rs 10 lakhs, then the tenders have to be discussed by a tender committee consisting of 3 officers; one from Stores Department, one from Consuming Department and one from Accounts Department. Officers below the rank of Senior Scale cannot be the members of a tender committee except the Accounts member, who is generally one grade lower. Tender Committee is a recommending body and its recommendations may/may not be accepted by a competent Tender Accepting Authority. Some of the points to be kept in mind for deciding tenders are as under:

- a. The offer should be technically suitable i.e., the material offered by the firm should be exactly as per our specification given in the tender enquiry. Offers of substandard materials are normally ignored.
- b. Out of all technically suitable offers, lowest offer is examined for reasonableness of rates.
- c. If the rate of lowest technically suitable offer is considered reasonable then it is to be seen whether delivery offered by the firm will meet our requirement with respect to delivery period and place of delivery.
- d. After satisfying about (a), (b) & (c) above, we see that the firm is reliable and has satisfactory record of past performance.
- e. Finally before accepting the offer, we see that all terms and conditions offered by the firm are acceptable. We normally, place all our purchase

orders as per "Indian Railways standard (IRS) Conditions of Contract". As per these conditions, we have the right to reject substandard materials, levy liquidated damages for delayed supplies, make risk purchases in case of default, etc.

6.7 Placement of Purchase Order: When the tenders have been decided, purchase officer records acceptance on the tender accepted by him and then the purchase case is passed on to the respective purchase section for preparation of purchase order. After the purchase order has been signed by the purchase officer, it is sent to Accounts Department for pre-check if value is more than Rs 4,00,000/-. All purchase orders issued against demands submitted by Stores Depots for stock items, availability of funds out of purchase grant is to be ascertained from Accounts Department. For this purpose, Accounts Department maintains an upto date liability register. At the time of issue of purchase order, value of purchase order is posted in the liability register and funds certificate is recorded on the purchase order. Finally, the purchase order is numbered. Purchase order Number consists of 16 digits out of which first 8 digits are same as Demand number or Tender No., 9th digit indicates mode of purchase, 10th to 14th digits are serial number which are allotted paying authority wise, 15th & 16th digit indicates serial number of the item, consignee, delivery date, if there are more than one item, consignee, delivery dates respectively in the purchase order. Purchase orders valuing more than Rs. 4.0 lakhs are pre-checked by finance to avoid any mistakes. After numbering, the purchase order is dispatched to suppliers by registered post A.D.

6.8 Contract Administration: The purchase activity is not over only on placement of purchase order. For getting the material in time, contract has to be properly administered. Immediately on placement of orders or after some time, we may get request from supplier for amending some of the clauses of the purchase order. All these requests have to be examined in proper perspective and amendments (or modification advices), if needed against the purchase orders are issued. For all the amendments, which may result into financial repercussions, we may have to take finance concurrence. If the supplier is not able to supply the materials within the stipulated delivery period, then as per law of contract, contract expires. Further extension has to be with mutual consent. Normally suppliers request for extension of delivery date and this is examined keeping all relevant factors in mind. As per IRS conditions of contract, we have right to recover liquidated damages for any loss or inconvenience suffered by us due to delays in supply of material. Sometimes, firms fail to supply the materials. As per IRS conditions of contract, if the firm fails to supply the material, we can purchase the material from the alternative sources at the risk and cost of the supplier i.e. if we pay any higher prices to the alternative source, the difference can be recovered from the defaulter. These purchases from alternative sources are known as risk purchases. In order to ensure that risk purchase is legally tenable, we have to follow certain procedures by which reasonable opportunity to make good the loss is given to the supplier and the risk purchase has to be arranged within a reasonable time (Which is normally 6 months for readily available items and 9 months for specific manufacturing items) from the date of breach of contract. Sometimes disputes may arise in the

execution of the contracts. If the dispute cannot be mutually settled, then as per IRS conditions of contract, it is to be referred to a sole arbitrator appointed by the General Manager and decision of the arbitrator will be final in such a case.

6.9 Supply of materials: Materials against purchase orders placed by Controller of Stores are supplied to the consignee mentioned in the purchase order.

6.10 Imported Stores and Indigenous Stores: In 1950-51, 23% was the proportion of imported stores out of all type of procurements and now it is only of the order of 3% to 5% by progressive indigenization.

7.0 Receipt & Inspection of Stores

The stores ordered by the Railways or by the Central purchase organisations are delivered either to a Stores Depot for the purpose of inspection and stocking in that depot or for onward dispatch to the user or are directly delivered to the user himself. In some of the purchase contracts the materials are inspected by the nominated inspecting authorities before dispatch of these materials. In these cases generally payments of 90% to 98% are released on proof of inspection certificate and dispatch. The balance payment is only released on final inspection by the consignee to whom the material is delivered by the supplier. In cases where such a clause for advance payment is not provided, 100% payment is made only after the material is received, inspected and accepted by the consignee and the bill is certified or receipt note granted. It is important that whether any inspection has been earlier carried out or not the consignee must inspect within reasonable time the materials properly and certify the bills or inspection notes. For inspection, the agency of test houses or Chemist & Metallurgist etc. may be employed. Pre inspection of materials is done by RITES/ RDSO/ DOI/ any other nominated agency. If after inspection the items are found to be not acceptable a rejection memo is issued indicating the reasons of rejection. If the stores are pre-inspected by an inspecting agency, then the consignee should arrange for the joint inspection and the finding of joint inspection will be final. The rejected material is returned to the supplier if no advance payment is made and after checking whether any ground rent is due etc. He is asked to tender fresh supplies to fulfill the contract.

8.0 RETURNED STORES

8.1 All the materials no more required by the consuming departments should be returned to the nominated stores depots for taking disposal action. Such materials are returned along with an Advice note for returned stores (form No. S-1539) prepared in 6 copies. The 6 copies are distributed in such a way that debits and credits can be raised by the Accounts department for the transaction satisfactorily.

8.2 Advice note for Returned Stores:

(a) As mentioned above the Advice Note for Returned Stores is to be prepared in six copies. The returning subordinate will retain one copy (1st copy) with him for his record.

Out of remaining 5, he will send 3 copies (2nd, 3rd, & 4th) to the nominated Stores Depot either along with the material or along with R.R./P.W. Bill, if the material has been dispatched by Rail. At the same time he will send one copy (5th) to the Stores Accounts office of the depot and last copy (6th) to his controlling officer. The purpose of these 5th & 6th copies is to give advance information to Stores Accounts Officers and his controlling officer so that they can monitor for getting timely and proper credits for their returned materials. This procedure is explained in subparagraph (b) below.

(b) The controlling officers are required to maintain a Departmental Register of Advice Notes (S-1605) for keeping watch on the account of returned stores. As soon as 6th copy of the Advice Note is received from the subordinate, it is entered in this Register (For convenience separate pages in the register may be allotted for each subordinate). At this stage, Advice Note is also scrutinized to see that it has been correctly prepared. If some information is found incomplete, further details are added in the Advice Note and then this is forwarded to the Stores Depot for getting credit particulars. Similarly Stores Account Office is also required to maintain an Accounts Register of Advice Notes (S-1622) to see that all the materials returned by various field subordinates are taken into books promptly and properly.

8.3 Valuation of Returned Store :The rate at which credit for returned stores is to be given depends upon whether the material is a Stock item or a Non-Stock item and also on its condition.

- (a) Credits for stock items are granted depending upon their stock position in the Depot and their condition. If the item is not overstock, then credit for a new Stock item is granted at full Book Average Rate and at half of this for second hand serviceable materials. However, if the depot stock of an item has already been declared as Dead surplus, then credits at scrap rates are given even for new or serviceable Stock items.
- (b) **Valuation of Non-Stock Items-** For Non-Stock items it is not certain whether they will be required for Railway use or not. Also, no separate book rate is maintained for them. Therefore, credit for all Non Stock items, whether new, second hand or serviceable, is granted at approximate scrap rate.
- (c) Credit for second hand Rail released from line which could be supplied to new projects or to other administrations is given at 65% of the present market price of new rail.
- (d) Valuation of plant and machinery :- In the case of serviceable plant and machinery, their value should be determined according to the following formula:

$$\text{Price} = R - (N/L) \times (R-S), \text{ Where,}$$

R = The present price of new machine

N= Age of the machine

L= The estimated life of the machine

S= Scrap value of the machine

9.0 Surplus Stores

When it is observed that items of Ordinary Stores have not been issued for a period of 24 months, they are then categorized as Surplus Stores. If it is anticipated that such items are likely to be used in the near future say next 24 months, it is called **Moveable surplus**. If it is established that these items will not be used on any Railway for another 24 months, it is then categorised as **Dead surplus**.

10.0 INVENTORY CONTROL

10.0 Improving Service level and Inventory Control: To ensure continuous availability of stores to user departments while keeping the stock levels at optimum level is one of the important objectives of Stores Department. Efficiency with regard to optimum stock levels is measured by working out inventory turnover ratio on every 31st march, which is worked out as under:

$$\text{Inventory Turn Over Ratio} = \frac{\text{(Total inventory balances in Rupees on 31st March)}}{\text{(Total value of stores issued during the year)}} * 100$$

The target for inventory turn over ratio is generally kept around 15%. The efficiency with regards to service is worked out by compiling compliance percentage of materials against all requisitions received in Stores Department. The target for compliance is kept between 95% to 98%. For vital and safety items, the compliance is aimed at 100%.

In order to keep inventory turn over ratio and compliance figure at optimum level, selective inventory management method is used on Indian Railways. We classify the item in A-B-C category as well as vital, essential and desirable category. These are explained below. We also use standardization, variety reduction and extensive computerization for inventory management.

10.1 A-B-C Analysis: This analysis is based upon Pareto Principle according to which in many situations, majority of the activity (say 80%) is governed by very few (say to 20%) attributes. Hence, if in Stores all the Stock items are analysed in terms of their annual consumption - usage value, major part of total consumption value say 70% is represented by around 10% of total items, 20% of total annual usage value is controlled by 20 % of total items, and remaining 10 % of total consumption value is represented by a large number (say 70%) of small consumption value items. In Railways we have decided that all high consumption value items which represent 70% of total annual usage value, will be classified as "A" category, items which represent further 20% of

total usage value will be classified as "B" category and all remaining items representing 10% consumption value will be "C" category. This analysis is done on the computer as explained below:

- (a) First of all annual issue values of all the items which were issued from all the depots are added together to find total issues (in rupees) of the Railway,
- (b) Then all the items are sorted in descending sequence of their issue value on the entire Railway (i.e. after adding issues of all individual depots),
- (c) Then we go on counting the items adding issue value of the items to a "cumulative issue value" counter. When the value in this counter represents 70% of total issues after adding a particular item, all the items from top to this item are classified as "A" category items,
- (d) This is further continued and when after adding issue value of an item to "cumulative issue value" counter, value in the counter is equal to 90% of total issues, we mark all items excluding "A" category items to the last item as "B" category items,
- (e) All remaining items are classified as "C" category items.

For the purpose of Inventory control, "A" category items are most important. Therefore, they are closely monitored at highest level at very frequent intervals. In Railways, their stock levels, consumption forecast etc., are monitored at the level of COS /CMM every month. "B" category items are monitored at the level of CMM/Dy.CMM every quarter or every six months. Stock verification of "A" category items is carried out every six months; for "B" category items every year and once in two years for "C" category. To achieve better inventory turn over ratio, we intend to keep average stocks of 3 months, 6 months and 12 months of "A", "B" and "C" category items respectively.

10.2 V-E-D Classification: A-B-C Classification is on the basis of consumption value of an item and does not give any importance to the criticality of the item and therefore, only A-B-C Classification is not adequate. Classification done on the basis of criticality of the item is known as V-E-D, where the items are classified as Vital, Essential and Desirable. Vital items are those items, which are very critical for the operations and do not permit any corrective time i.e. they cannot be procured off the shelf if they are not available. Essential items are comparatively less critical and work without them can be managed for a few days. All remaining items are known as Desirable items.

10.3 A-B-C / V-E-D matrix tackling the items on the basis of their consumption value and also criticality improves the service to the customer as well as we are able to control the inventory. We can design the stock levels in such a manner that is most desirable. For remaining items, service levels can be in between these two levels and average stock holdings can be designed accordingly.

TYPE OF ITEM	A	B	C

V	Critical scrutiny of requirements for economy		Liberal & better compliance for reducing Stock Out Costs
E			
D	Procurement not to be encouraged		Routine scrutiny

Standard Tools for Inventory control:

- By selective management (ABC/VED/XYZ /SOS/FSN etc),
- Management by exceptions (out of stock, inactive, surplus etc.),
- Designing appropriate recouplement policies,
- Rationalisation /Standardisation,
- Value analysis,
- Codification and computerization,
- Concept of classifying materials on market availability (R, N, D) for buffer stocks.

11.0 SCRAP DISPOSAL

11.1 Scrap: The word scrap has a special meaning in the railway working. Apart from the worn-out and damaged parts and materials arising out of operation, production and maintenance in the Railway system, scrap also includes all items, which are no longer useful for the purpose for which they were originally procured. All such scrap is required to be expeditiously collected in the scrap yards and disposed off. During the year 2011-12, Railways disposed off scrap worth Rs. 4000 crores.

11.2 The scrap accumulated in scrap depots are disposed off periodically by the Stores department, by adopting any one of the following methods:

- (a) Public auction
- (b) Tender Sales (Some times auction cum tender method is also adopted for better results)
- (c) Direct Sales
- (d) Sales to Employees

However, no such sale can be effected before the scrap and other obsolete items on sale are cleared by a Survey Committee. This committee consists of stores and technical officers who will inspect every materials proposed to be scrapped and sold barring a few exceptions like condemned rolling stock, turnings and borings, etc. The Survey Committee thus ensures that no material useful to Railway can be disposed off unless the same is inspected and cleared by an expert body. For rails and other P. Way material, Engg. Department does the necessary condition report and inspection and CTE/CE's sanction is obtained for disposal.

11.3 Sources of Scrap:

- (a) Railway Workshops
- (b) Condemned Rolling stock such as wagons, coaches, locomotives, boilers, etc.
- (c) Scrap permanent way materials such as released condemned rails and other P way.
- (d) Inactive/surplus items being declared as scrap.

11.4 Location and layout of scrap yard: The location of scrap yards is determined largely on consideration of freight charges, space availability and proximity to the market for disposal. Arrangements should be made to see that double handling is avoided, as far as possible.

11.5 Formation of Lots: Scrap of a particular description (PL No. as classified in the Scrap schedule) received from different sources (in case of mixed scrap, after sorting) are placed in a particular lot. The idea of lot formation is to accumulate economic quantity of a particular item of scrap to be attractive to participants in auction. Therefore, a lot should not be too small. This should also not be too large as this will restrict auction virtually to a few rich parties only, on account of high value and will promote "Cartel" or "Ring formation".

11.6 Lot Register: Once the lots have been formed for the purpose of auction sale, the details are entered into Lot Register which have columns for lot No., Description, Book Rate, Approximate Quantity, Rate secured at previous auctions, Name of the Purchaser, Rate at which auctioned, total value of stores and remarks.

11.7 Survey of Scrap and other Materials: Survey committee is the Committee of Senior scale or JA Grade officers of the Consuming Departments with Stores Depot Officer as convener member and major workshop officer as Secretary. This committee is a standing committee appointed by General Manager for the purpose of inspecting critically the condition of all Stores:

- (a) That have deteriorated in value, for any reason,
- (b) Broken or damaged in transit, or while in stock,
- (c) Lying in the custody of the Stores Department for a long time and considered by Controller of Stores as having become unserviceable owing to obsolescence or other causes and

- (d) Received as scrap from the line.

Preparation of survey sheets: Survey sheets on the prescribed proforma are prepared in which recommendations against each item are recorded by the Secretary of the Committee and signed by all members of the survey committee.

Some items are exempted from surveying by survey committee. These items are turnings and borings, waste paper, firewood, saw dust etc. Survey is not required for condemned rolling stock, rails and sleepers on line for which condemnation certificates given by Chief Work Shop Manager and Chief Track Engineer respectively are considered adequate. Lots of small value (Rs. 5000/- at present) are also not required to be surveyed for which depot officers have been given powers to scrap such lots.

11.8 Sale of Scrap Materials:

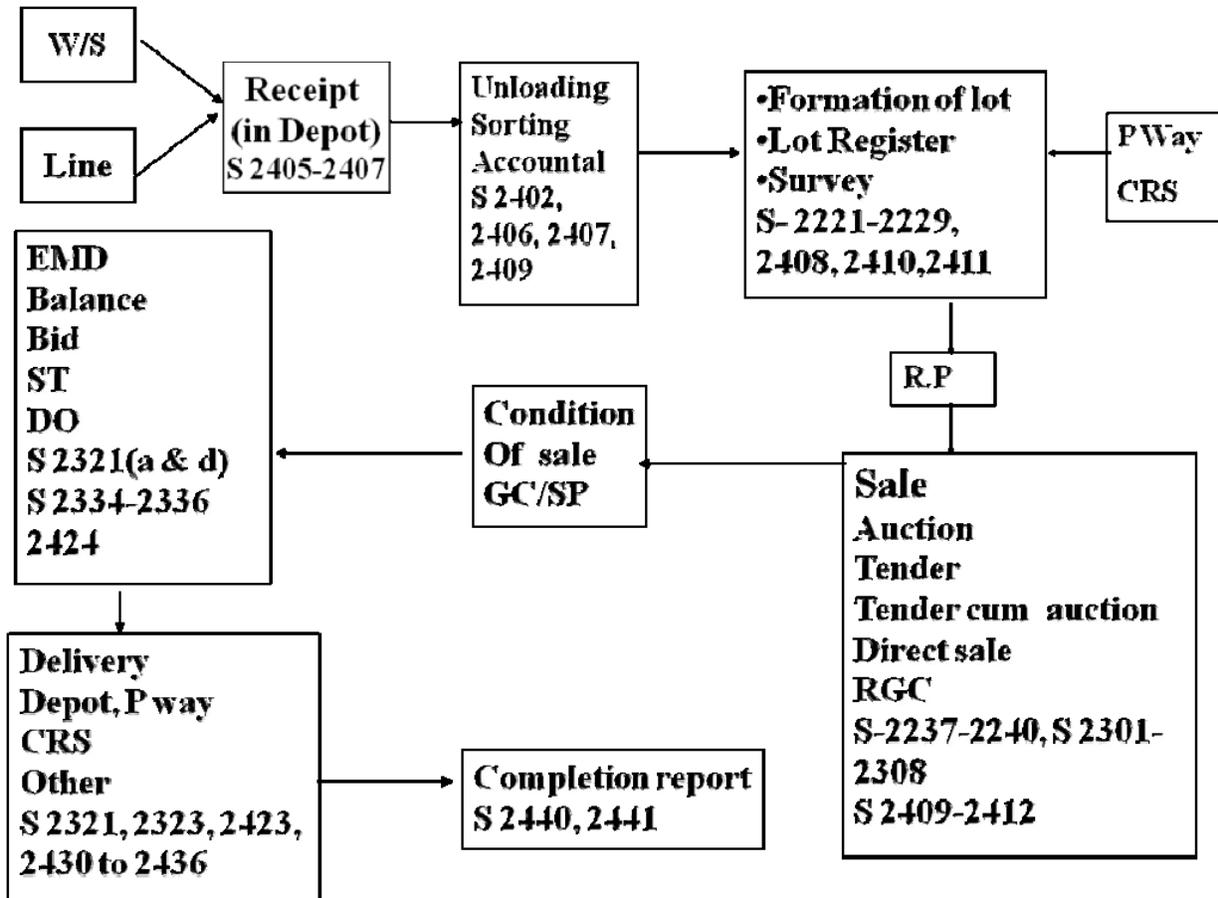
- (a) Sale through Public Auction- By conducting public auction at regular intervals and putting the materials in those auctions.
- (b) Sale through Tenders- By inviting tenders for the materials to be sold either through advertised tenders or by giving tender enquiries to likely purchasers.
- (c) Direct Sale- Some materials may be sold directly at pre-determined rates to Railway employees and other government organisations. The rates are generally based on last auction rates.
- (d) Quoting for Sale- For some of the items, we may submit quotations/tenders to other organisations if they have floated tenders for purchase of scrap.

11.9 Auction Sales: Auctions are generally conducted departmentally. On the nominated date and time, auction is started. In order to restrict entries of undesirable elements, a system of refundable entry fee of Rs. 10,000/- is in place. Depot Officer who is of the rank of J A Grade, conducts the auction in the presence of a representative of Accounts Department. The decision to sell a particular lot during the auction is taken by the Depot Officer. For taking this decision, he fixes a Reserve Price of each lot in advance. This reserve price is fixed keeping in mind past sale rates, market trend and also condition of the lot. Depot officer has also discretion to accept below the reserve price by certain amount (normally 5%), if the bids to the reserve price are not coming and there are reasons for accepting the bids at lower rates.

11.10 Bid Sheet: At the time of auction when the lot has been sold, a Bid Sheet is prepared which contains details of lot No., Brief description of the lot, Quantity sold, the rate at which sold, the earnest money realized and the total amount payable and special conditions, if any. Bid sheet is signed by the Auction Conducting Officer, Accounts Representative, Custodian DMS of scrap yard and the purchaser.

11.11 Issue of Delivery Order: When the balance sale value has been paid by the purchaser in full and he has fulfilled all the other conditions of sale, a Delivery order is issued to him by the Depot Officer. Delivery order is an authority for the purchaser to take delivery from the Scrap Yard. It specifies the date by which the delivery is to be taken. In case facility of installment has been allowed to the purchaser, delivery orders are also issued in installments for the quantity for which payment has been received. In such cases, we have to ensure that earnest money deposited is adjusted only at the end.

11.12 Scrap Disposal Flow-Chart :



12.0 IMPORT

1.0 The New Exim Policy:

The new Exim Policy was introduced w.e.f. 1st April 1992. Imports/Exports can now be done freely except as regulated by the Policy, by means of Negative Lists. The Exim Policy 2002-07 is currently in vogue.

The Acts governing Foreign Trade in India are:

- Foreign Trade Development and Regulation (FTDR) Act,
- FEMA & Day to day regulations as per Exchange Control Manual of RBI

1.1 Negative Lists:

“Negative Lists”, are issued as a part of Policy. Negative List is issued in three parts as under -

(i) Prohibited Items: Prohibited goods shall not be imported/exported. Examples are;

- Tallow fat, poultry fats, and edible fats of animal origin.
- Animal rennet.
- Wild animals, their parts and products.
- Ivory.

(ii) Restricted Items: These items can be imported only against Import License & by the actual user, unless waived by Director General of Foreign Trade (DGFT), New Delhi (and its subordinate offices), Ministry of Commerce. Examples of such items are;

- Consumer goods.
- Cotton, woolen, silk, manmade & blended fabrics.
- Alcoholic beverages, wine, saffron, precious, semi-precious and other stones.
- Safety / Security related items.
- Fire arms, ammunitions.
- Paper for security printing, currency papers.
- Explosives.
- Chloroform, Hydro carbons.
- Seeds, plants and animals.
- Insecticides & Pesticides.
- Drugs & Pharmaceuticals.
- Chemical & Allied items.
- Items related to small scale sector.
- Aircraft & Helicopters.
- Natural rubber.
- Rare earth oxide.
- Naphtha

(iii) Canalized Items: These items can be procured only through Agencies specified in the Negative List. However CCI&E may grant a license to any other person to import/export. Examples are;

- Petroleum Product, Aviation fuel, Crude oil, Motor spirit, High speed diesel: **IOC**
- Nitrogenous, Phosphatic and Potassic, –Fertilizers, Potash: **MMTC & STC**
- Coconut oil, Palm Oil: **STC**
- Cereals: **FCI**
- Clove: **STC**

2.0 Why Import? There are following main reasons:

- Requirement exceeds indigenous manufacturing capacity; excess requirement is imported.
- Urgent requirement; DP of indigenous suppliers not suitable.
- PAC item of a foreign supplier (single source).
- Technical advantage.
- Cost advantage.

2.1 What is being imported?

- Diesel & Electric Locomotives & its parts and fittings.
- Diesel Components: Major Purchase By DLW: From USA, Canada. Governors: From USA/ Japan.
- Electric Loco Spares: By CLW / RB from USA , Sweden, Germany.
- Coaches (High Speed Bogies): By RB from France, Germany.
- EMU Spares
- Track laying & maintaining machines & Spares
- WTA: By RB. Wheels from Brazil, Poland, Japan, South Korea.
- Bearings: From Timken - USA, UK, SKF/ Sweden, FAG/Germany.
- Rails: From Poland, Brazil, UK, USA.
- Telecom Items: From Japan, USA.
- Machines (M&P): BY COFMOW – From Germany, Sweden, France, USA, Japan & its Spares by user Rlys.

2.2 Level of Imports by IR:

Year	Imports (Cr.)	Total (Cr.)	%age of Imports
1950-51	18.40	81.60	23.0
1960-61	19.80	177.90	11.0
1970-71	32.60	363.70	9.0
1980-81	143.80	1377.10	10.4
1990-91	440.10	5189.30	8.4
2000-01	462.00	10835.00	4.3
2001-02	385.16	10950.00	3.5
2006-07	594.00	18651.00	3.2
2007-08	630.00	21982.00	2.9

2008-09	813.00	27495.00	3.0
2009-10	1151.00	27876.00	4.1
2010-11	1082.00	29099.00	3.7

3.0 Import Procedures

3.1 Pre- Tendering Stage:

- Important Points are as under-
 - a) FOB price with details of freight & insurance.
 - b) Purchaser's right to place contract on FOB,FAS,CIF.
 - b) Clear Payment terms.
 - c) Pre-dispatch inspection details.
 - d) Packing details with approximate weight of the consignment.
 - e) Essentiality Certificate

- Additional information on Indian Agents is required, in case the supplier wants to supply through the agent (Ref. Railway Board's letter no. 89/RS(G)/779/6 dated: 22.01.2009)
 - a) Relationship with the Principal, Agent/Associate/Sole Distributor.
 - b) Agents' IT PAN No.
 - c) Capability; service only on the contract or in general, facilities available with the agent.
 - d) Past Performance details of the Agent.
 - e) Contacts of Agent.

3.2 Tender Invitation: While issuing Global Tenders, (especially against WB loans), tenders are required to be published –

- In all member countries of WB (Developed/ Developing).
- Send Tender Notice to local official representatives of such countries (Embassies or Trade Commission).
- News Papers of purchasing country.
- Follow World Bank bidding & contracting procedure, when required.

3.3 Currency of Bidding:

- Price in the bid to be in the currency of bidder.
- Price can be in US \$ or any "widely used currency" in the International Trade.
- Expenditure incurred in India to be paid in Indian Rupees.

3.4 Currency of Payment:

- In which price was quoted by the successful tenderer.
- Purchaser reserves the right to pay in the currency of the " country of origin", if price is quoted in any other currency.
- Rate of exchange as applicable on the "date of payment".

3.5 Bid Classification, after technical evaluation (WB funded procurement):

- **Group A:** Offer for indigenous Equipment, with more than 20% indigenous input (Value addition).
- **Group B:** Imported item, available in India, on Rupee payment (These are no more foreign goods, since custom duty paid).
- **Group C:** To be imported (Outside Group A&B).
- If C is costly, cheaper of A&B can be purchased. If C is lowest, A to be loaded with 15% price preference, then cheaper A & C to be accepted

3.6 Tender Finalization, Some Points:

- Tender Committee level is decided based on landed Value of the offers.
- No Price preference is given to indigenous supplier against a foreign supplier.
- Agency commission is not to be taken as value added in India.
- 15% Price Preference to indigenous suppliers is available: Only against GT under WB funded procurements & provided value addition in India exceeds 30% of ex-factory price.
- No negotiation is allowed in case of WB aided purchases.

3.7 Basis of calculating CIF Value:

- Rate of exchange on date of tender opening (Commercial Bid).
- @ BC Selling rate as advised by SBI for the purpose of Rate of exchange.
- Add 10% for freight & 1% for insurance, if actual not available and quoted by the bidder.

3.8 Agency Commission:

- It is paid in non-convertible Indian Rupees at TT Buying Rate and as ruling on the date of contract finalization.
- It is a fixed amount.
- Railways reserve the right to retain commission till the Agent discharges his entire warranty obligations, satisfactorily.
- Commission if higher than 5%, will need consideration at AGM/GM's level.

4.0 Shipping Arrangements:

- Contract should be made, preferably on FOB basis.
- Shipping to be arranged through "Shipping Coordination Committee", SCI.
- Indian Flag vessel to be used .
- Age of the vessel to be < 15 years.
- Ship belonging to India-Burma-Bangladesh-SriLanka-Pakistan, Conference Lines.
- It facilitates payment of freight in Indian Rupees

4.1 Air Lifting is permitted only when:

- It is Electronic / Sophisticated.
- In case of fragile goods.
- Urgent requirement.
- Consignment should move by Air India.
- FE can be released by GM with FA&CAO's concurrence.

- Full powers for air freighting as per acceptance with COS/GM with FA&CAO's personal concurrence.

5.0 Types of Import Contracts:

INCO terms- There are 13 INCO terms.

(i) FAS (Free Alongside Ship):

- Responsibility of foreign supplier ceases once he delivers material alongshore.
- Importer has to bear all charges of –
 - i. Loading the consignment into the ship
 - ii. Freight charges from port of dispatch to port of entry.
 - iii. Insurance charges.
 - iv. Can choose Indian vessel for shipping the goods, to save foreign exchange to the extent of ocean foreign charges.

(ii) FOB (Free on Board):

- Supplier's responsibility is to get the goods loaded into the ship.
- Freight & Insurance charges are to be borne by buyer.
- Buyer can choose Indian Flag ship & save foreign exchange to the extent of ocean foreign charges.

(iii) CIF (Cost Insurance Freight):

- Add the element of Freight & Insurance to FOB contract & it becomes CIF contract.
- Total price up to the port of destination is the contract price here.
- Supplier sometimes insists on their choice of vessel, which may not be Indian Vessel.

(iv) FOR (Free on Rail) [Only when Indian agent handles port clearance etc.]:

- This is not an INCO term.
- Supplier's Agents directly deal with the Principals and Offers submitted by Indian Agent on FOR basis.
- All transactions, including cargo clearance at Indian Port are to be handled by the Agent.
- Consignment placed on FOR station of dispatch/destination as per the contract condition.

6.0 Pre-dispatch Inspection of Imported consignment:

- In case of pre-dispatch inspection, it is done by Railway Advisor (RA) attached to High Commission of India, London for supplies from Europe.
- RAs are also attached to Indian Embassies in Germany, Switzerland & France.
- RITES covers the rest of the locations.

7.0 Insurance Policies:

- All the imported cargos of IR are insured.
- Railway Board takes two open covers for insurance as under-

7.1 FPA (Free Particular Average) Risk Cover:

This Insurance policy covers loss:

- When vessel is stranded, sunk or burnt, due to storm or act of God.
- Steel & Bulk cargo are covered under FPA.
- In items of this policy claim for total loss only are entertained & not for damage or short landing etc.

7.2 All Risk Open Cover:

This policy covers –

- All types of imported stores other than Steel & other Bulk Cargo.
- Covers risks of all sorts including loss/damage, theft & non-delivery of the consignments.
- Warehouse to warehouse risk cover is available.

8.0 Payment in case of Import contracts:

- (i) Relevant Considerations:
 - Supplier & Buyer have no intimate knowledge about each other hence, not sure of credit worthiness of each other.
 - Both the parties are governed by rules of their respective countries, which are normally different sets of rules.
- (ii) Risks involved from the Contracting Party's Points of view:
 - If seller sends goods without payment: There is a risk of non-payment or late payment.
 - If buyer sends payment without receiving goods. There is a risk of non-supply or late supply.
 - There is a clear need for protection of interests of both the parties i.e. the buyer and the seller.
 - Solution is available in the form of Letter of Credit

8.1 What is Letter of Credit (LC)?

- An instrument to cover risk for both parties
- It is a commitment by Bank
- To place an agreed amount of money at Seller's disposal
- On behalf of the Buyer
- Under precisely defined conditions

Parties to a Letter of Credit (LC)

- Buyer/Importer - Applicant
- Seller/Exporter - Beneficiary
- Buyer's Bank - Issuing Bank
- Bank in Seller's Country - Advising/Notifying /Negotiating Bank

8.2 Various types of LC:

(i) Revocable LC:

- It is a legally binding undertaking.
- However it may be cancelled or amended anytime by the buyer, but before the payment is made, without consultation or prior notification to the seller.
- As per UCPDC, all credits are revocable unless stated otherwise.
- Not preferred by the seller, obviously.

(ii) Irrevocable LC:

- Issuing Bank gives binding undertaking to the seller for making payment.
- Provided the seller complies with prescribed conditions in the LC.
- This LC cannot be cancelled or modified without the consent of all the parties concerned.

(iii) Revolving LC:

- When regular continuing shipments by seller is involved this type of LC is used.
- Amount once utilized is available again (like Imprest recoupment).
- The advantage of this type of LC is that fresh LC is not required to be obtained for each shipment, which is both time consuming and costly.
- The buyer may indicate maximum number of revolutions and maximum amount available under the credit, for a specified period.

(iv) Standby LC:

- It is similar to Performance Bank Guarantee but in the form of a LC.
- Issuing Bank assures the beneficiary that in the event of Buyer failing to pay, the beneficiary may request payment from the issuing Bank.

8.3 Opening of LC:

(i) Making of Application for opening of LC:

- Made by nominated Accounts Officer of the Railway.
- He makes the application and the guarantee for LC to the issuing Bank.
- Addressed to RBI and copied to SBI (the LC opening Bank) and the Importer (COS).
- It is a contract between the Bank and Importer.
- The application stipulates conditions for discharge of L/C and release of payment.
- Conditions not to be in contravention of Exchange Control Regulations.

(ii) Information in L/C Application:

- Beneficiary's name and address,
- Value (not exceeding CIF value of Import License (IL), where applicable),

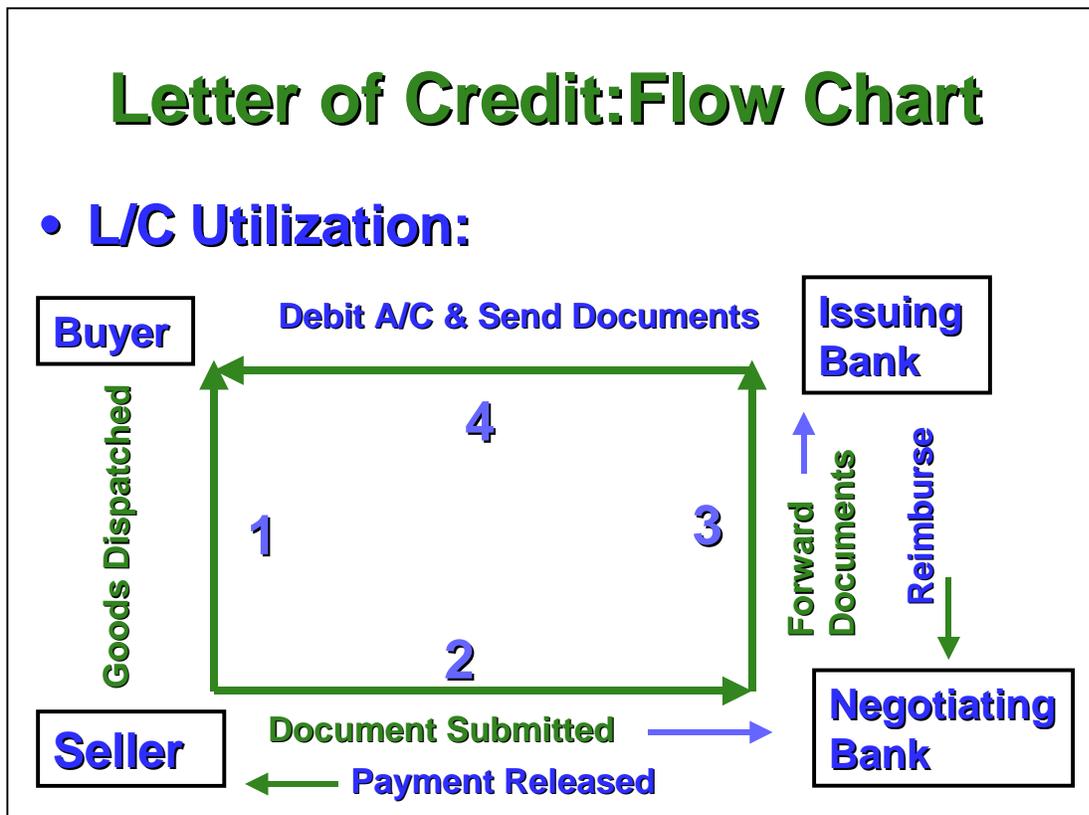
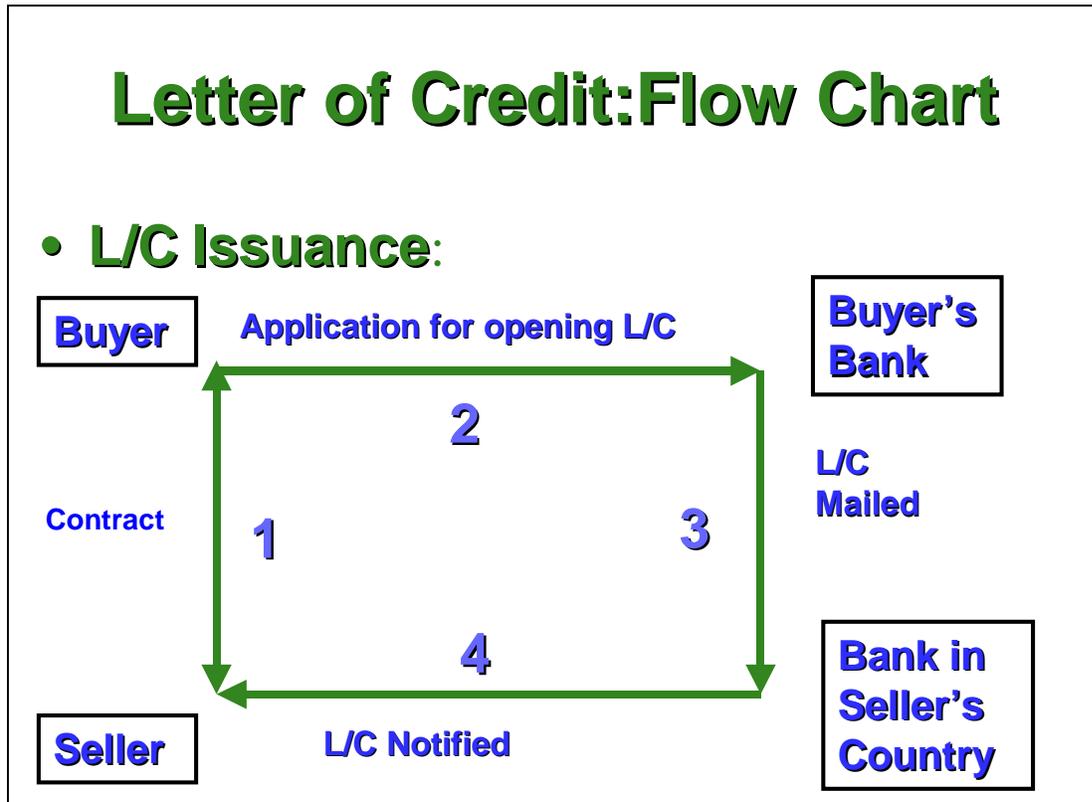
- Price, Quantity of goods,
- Payment Terms, LC type etc., Insurance Terms,
- Description of goods (as per IL),
- Delivery/Sale terms (FOB, FAS, CF, CIF),
- Country of Origin certificate, from Chamber of Commerce of the seller's country,
- Port of shipment and Destination,
- Contractual Date of shipment and IL Validity date.

8.4 LC Negotiating Documents:

The seller is required to present following documents to the bank for negotiating and getting his payment:

- Bill of Lading/Airway Bill: Evidence of dispatch,
- Marine Insurance Policies,
- Signed Invoices,
- Country of Origin certificate,
- Packing List,
- Inspection Certificates, when required,
- Freight Note.

8.5 Issue and Utilisation of LC:



9.0 Agencies related with Import work:

Purchase office, Port consignee, Clearing agent, Bank (Indian/foreign), Supplier, Shipping company, Customs Department, Port authorities, Ultimate consignee, Insurance company, Indian agent of supplier.

12.0 Introduction to Supply Chain Management

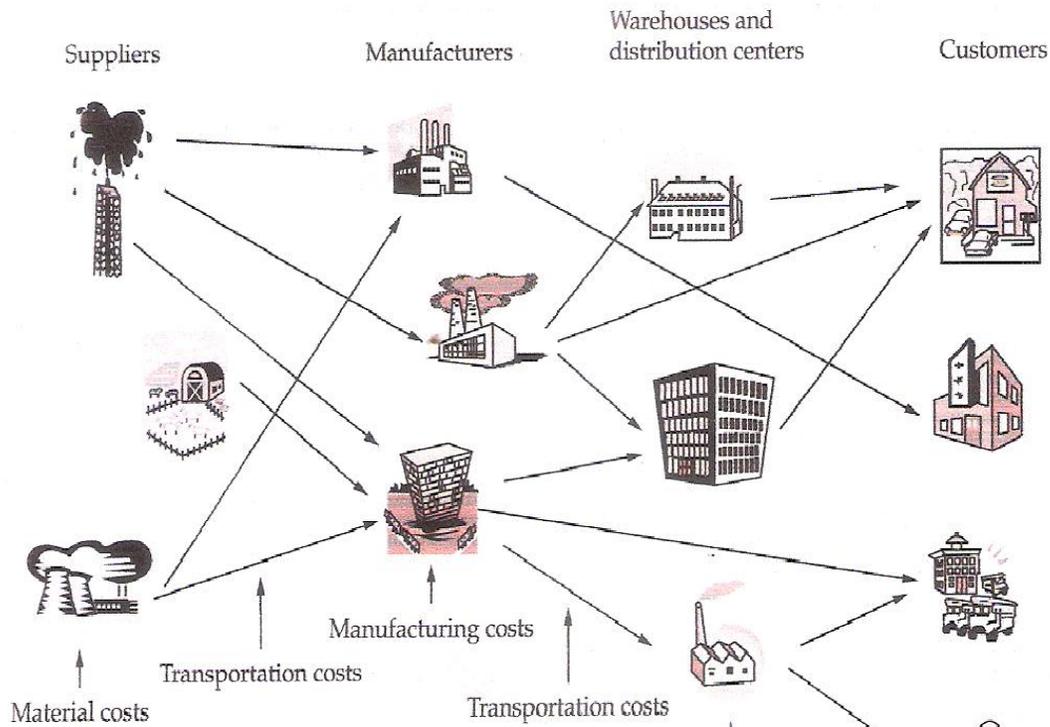
1.1 What is Supply Chain Management:

Fierce competition in today's global markets, the introduction of products with shorter life cycles, and the heightened expectations of customers have forced business enterprises to invest in, and focus attention on, their supply chains. This, together with continuing advances in communications and transportation technologies (e.g., mobile communication, Internet, and overnight delivery), has motivated the continuous evolution of the supply chain and of the techniques to manage it effectively.

In a typical supply chain, raw materials are procured and items are produced at one or more factories, shipped to warehouses for intermediate storage, and then shipped to retailers or customers. Consequently, to reduce cost and improve service levels, effective supply chain strategies must take into account the interactions at the various levels in the supply chain. The supply chain, which is also referred to as the logistics network, consists of suppliers, manufacturing centers, warehouses, distribution centers, and retail outlets, as well as raw materials, work-in-process inventory, and finished products that flow between the facilities (see Figure 1-1).

DESIGNING AND MANAGING THE SUPPLY CHAIN

DESIGNING AND MANAGING THE SUPPLY CHAIN



Definition of supply chain management is as follows:

Supply chain management is a set of approaches utilized to efficiently integrate suppliers, manufacturers, warehouses, and stores, so that merchandise is produced and distributed at the right quantities, to the right locations, and at the right time, in order to minimize systemwide costs while satisfying service level requirements.

This definition leads to several observations. First, supply chain management takes into consideration every facility that has an impact on cost and plays a role in making the product conform to customer requirements: from supplier and manufacturing facilities through warehouses and distribution centers to retailers and stores. Indeed, in some supply chain analysis, it is necessary to account for the suppliers' suppliers and the customers' customers because they have an impact on supply chain performance.

Second, the objective of supply chain management is to be efficient and cost-effective across the entire system; total systemwide costs, from transportation and distribution to inventories of raw materials, work in process, and finished goods, are to be minimized. Thus, the emphasis is not on simply minimizing transportation cost or reducing inventories but, rather, on taking a systems approach to supply chain management.

Finally, because supply chain management revolves around efficient integration of suppliers, manufacturers, warehouses, and stores, it encompasses the firm's activities at many levels, from the strategic level through the tactical to the operational level.

What makes supply chain management crucial?

1. **Supply chain strategies cannot be determined in isolation. They are directly affected by another chain that most organizations have, the development chain** that includes the set of activities associated with new product introduction. At the same time, supply chain strategies also should be aligned with the specific goals of the organization, such as maximizing market share or increasing profit.
2. **It is challenging to design and operate a supply chain so that total systemwide costs are minimized, and systemwide service levels are maintained.** Indeed, it is frequently difficult to operate a single facility so that costs are minimized and service level is being considered. The process of finding the best systemwide strategy is known as global optimization.
3. **Uncertainty and risk are inherent in every supply chain;** customer demand can never be forecast exactly, travel times will never be certain, and machines and vehicles will break down. Similarly, recent industry trends, including outsourcing, offshoring, and lean manufacturing that focus on reducing supply chain costs, significantly increase the level of risk in the supply chain. Thus, supply chains need to be designed and managed to eliminate as much uncertainty and risk as possible as well as deal effectively with the uncertainty and risk that remain.

AFP- STORES QUESTION BANK

Part I

Q No. 1 Answer briefly any five of the following:-

- A) What are the advantages of standardisation ?
- B) What is the role of value analysis in Material Management?
- C) What is the difference between a limited tender and a special Limited tender?
- D) How Rails & P. Way items are condemned in the Railways ?
- E) What is the difference between a Tender committee and a Survey committee ?

Q No. 2 Describe various methods of Inventory control in Indian Railways.

Q No. 3 Explain how a little saving in inventory may affect profitability of the organisation significantly and why? Give suitable example.

Q No. 4 (a) List various sources of scrap mobilisation. (b) How overage and underage wagons are condemned ?

Q No . 5 Write short notes on the following :

- | | |
|---|--------------------|
| (a) Pareto law of Mal-distribution | (b) Turnover Ratio |
| (c) Computerization in store applications | (d) Service level |
| (e) Fixation of Reserve price | (f) EOQ Model |

Q No. 6 What is the difference between EMD and SD ?

Q. No. 7 Describe imprest stores ?

Q. No.8 While describing an item for example, " Soap toilet ordinary" is written instead of "Ordinary toilet soap". Give reasons for your answer.

Q No. 9. Describe ABC and VED analysis .

Q.10. Write short notes :

- | | |
|-------------------|---|
| A) Global tenders | B) Confirmed and irrevocable Letter of Credit |
|-------------------|---|

Q.11. Differentiate between:

A) FOB and FAS

B) Bill of Lading and Bill of entry

C) Bankers buying and selling rates

D) Wharfage and demurrage

Q.12 Expand the following:

(a) DGFT

(b) FERA

(c) MMTC

(d) DGS&D

Q. 13 Describe different types of supply tenders.

Q.14 Describe briefly different types of supply contracts ?

Q.15 Under what circumstances we can invite single tender ?

Q.16 What are the functions of materials Management department on Railways ?

Q.17 Describe the scheme of material codification on Railways.

Q.18 What is the difference between ordinary stores and emergency stores ?

Q.19 Why do we provide buffer stock ?

Q. 20 Enlist different agencies of procurement?

Q. 21 Write a short note on valuation of returned Stores.

Q.22 Enlist any three INCO terms (full form).

Q.23 What is letter of credit and how it is opened ?

Q.24 What is a PAC ?

Q.25 Explain Turnover Ratio? Calculate turnover ratio based on following data -

Stock value as on 30.09.11-

Rs. 20 Cr

Current total issues from 01.04.11 to 30.09.11-

Rs. 100 Cr

Q.26 What is Economic Order Quantity (EOQ) ? Explain with the help of diagram.

Q.27 Write full form of following abbreviation:-

(a) FOB (b) CIF (c) FOR (d) FAS (e) RLO (f) CRS

Part- II

Please tick the most appropriate choice:

Q.1. Imports made by Railways attract following taxes/duties:

- A) Customs duty
- B) Sale Tax
- C) Customs duty + Sales tax
- D) Excise duty + Customs duty

Q.2. For clearing the Cargo through customs Deptt., importer has to submit a document called:

- A) Import Manifest
- B) Import Application
- C) Bill of Entry
- D) Airway Bill

Q.3. Indian agent is paid in Indian rupees, which is worked out based on the exchange rate:

- A) Bank's selling Rate- Bill
- B) Bank's selling Rate- TT
- C) Bank's Buying Rate- Bill
- D) Bank's Buying Rate- TT

Q.4. For importing an item, Zonal Railway/Production Unit obtains the foreign exchange from :

- A) Open Market
- B) Railway Board
- C) Reserve Bank of India
- D) Ministry of Finance

Q.5. In confirmed and irrevocable letter of credit, there is definite undertaking by:

- A) Issuing bank only
- B) Confirming bank only
- C) Confirming bank as well as issuing bank
- D) Issuing Bank, advising bank and confirming bank

Q.6. In FOB contract, the seller bears all the charges until the cargo:

- A) Is delivered to the agent of shipping company
- B) Passes over the railing of ship
- C) Is loaded and stacked on the vessel

D) Is delivered at the port of shipment

Q.7. Marine Insurance contract entered into by the Railway Board covers the inland transportation to the final destination. The normal duration of insurance cover for sea cargo is:

A) 150 days

B) 120 days

C) 90 days from the date of landing at port landing

D) 60 days

Q.8. As per current EXIM policy, Railways can Import freely any item :

A) Except restricted items

B) Provided it is actual user of that item

C) Not appearing in the negative list of import

D) Except prohibited items

Q.9. Open cover for insurance is decided by the Rly Board for all shipments due to following benefits:

A) Materials can be kept in open spaces

B) Materials are covered during shipment by a protective layer on the ship.

C) It is arranged in advance and there is no risk of shipment being uninsured

D) Amount of premium is very small

Q.10. Exam policy is declared as a five years package. This is essentially so because: -

A) Custom duty would continuously be reduced by the Govt. of India during this period.

B) No amendments in the negative list items or OGL items will be made during this period.

C) Duly focuses towards general guidelines for an export import house for proper planning for a sustained business.

D) Generally PM's office tenure in Govt. of India is for 5 years.

Q.11. Correct expansion for B/L is

(a) Bill of landing

(b) Bill of lading

(c) Bill of leading

(d) Bill of loading

Part- III

1. The value of Stores Purchases on Indian Railways in the year 2010-11 were of the order of

- A. Rs. 1,000 Crores
- B. Rs. 2,500 Crores
- C. Rs. 16,000 Crores
- D. Rs. 29,000 Crores

2. Function of an item remaining constant, if the cost decreases, its value will-

- A. increase
- B. decrease
- C. remains constant
- D. may increase or decrease

3. In order to avoid any contingency, stock at re-order level has to be-

- A. More than lead time requirement.
- B. Less than lead time requirement.
- C. Equal to lead time requirement.
- D. Does not have any relation

4. Stores Directorate in Railway Board is under-

- A. Member (Mech)
- B. Member (Elect)
- C. Member (Staff)
- D. Financial Commissioner

5. Economic order quantity (EOQ) is determined by optimizing between-

- A. Demand and Supply
- B. Ordering cost and Carrying cost
- C. Budgets and Service level
- D. User and Accounts department

6. Forecasting accuracy increases if the planning period is-

- A. Shorter
- B. Longer
- C. Zero
- D. Infinity

7. Ambiguity in Description and specification of material will have the following effect on Lead Time-

- A. It will decrease
- B. It will increase

- A. Fully significant coding system
- B. Semi significant coding system
- C. Non significant coding system
- D. Color codification coding system

14. In Indian Railways the case is to be dealt by tender committee, when it is a case of

- A. Open tender
- B. Limited tender
- C. Bulletin tender
- D. High value tender above 10 lakhs

15. When the firms are selected and tender enquiry is sent to them, it is a case of

- A. Open tender
- B. Limited tender
- C. Bulletin tender
- D. Global tender

16. In Indian Railways the case is to be dealt by tender committee when the purchase value is more than Rs.

- A. 3 lakhs
- B. 2 lakhs
- C. 5 lakhs
- D. 10 lakhs

17. In Indian Railways 'A' category items represent what percentage of total consumption value?

- a) 50 %
- b) 90%
- c) 65%
- d) 70%

18. PL No. of an item is 11360010. This item may be an item of

- A) Stationery
- B) Steam Locomotive
- C) Electrical item
- D) Diesel Locomotive

19. EOQ is the Quantity at which –

- A) Inventory carrying cost is maximum
- B) Warehousing cost is minimum
- C) Inventory carrying cost + ordering cost is maximum

D) Inventory carrying cost + ordering cost is minimum

20. In a Rate Contract –

- A) Quantity is not specified B) Delivery period is not specified
C) Rough estimate of quantity is given D) Quantity to be supplied is fixed

21. Check digit in a PL No. for an item appearing at SL.No. 181 in sub group 02 in Main Group 00 will be –

- A) 8 B) 5 C) 3 D) 7

22. System of Recoupment to be followed for recouping Emergency stores is –

- A) Maxima- Minima B) Periodic review
C) Base stock D) Combination of (A) & (B)

23. Tenders are to be invited for purchasing 12000 nos. of Chokes approx. rate of which is Rs. 90/- each. In this case we will normally invite -

- A) Open tender B) Limited tender
C) Single tender D) Bulletin tender

24. In a PL No. the subgroup to which the item belongs to is represented by –

- A) First two digits B) 3rd and 4th digits
C) 5th and 6th digits D) 2nd and 3rd digits

25. Total number of stores depots on Indian Railway are approximately-

- A) 120 B) 20 C) 230 D) 320

26. At the time of review, it is revealed that an item is not issued to any user for past 26 months but the item is likely be issued in next 22 months. This item will be classified as –

- A) Dead Surplus C) Custody stores
B) Moveable surplus D) Imprest stores

27. In ABC analysis of items, "A" category items represent

- A) Low consumption value items
- B) Important items
- C) High Annual consumption value items
- D) High rate items

28. Buffer stock limit depends on –

- A) ABC classification of the item
- B) VED classification of the item
- C) Combination of (A) & (B)
- D) Stock & Non-stock classification of the items

29. Buffer stock is provided –

- A) To meet unforeseen requirement
- B) To supply items to other users
- C) To make good shortfall due to theft, deterioration
- D) To have items out of stock

30. Stock of an item with a Section Engineer on 01-06-2012 is 500 nos. Sanctioned imprest of this item is 1500 nos. Quantity of the item to be recouped by him will be equal to-

- A) 500 nos.
- B) 1500 nos
- C) 1000 nos
- D) 2000 nos

31. In a VED analysis "V" stands for –

- A) Vague items
- B) Very costly items
- C) Vital item
- D) Variety of items

32. Indication of value in the demand is necessary-

- A) For posting in liability register / fund register
- B) For knowing the appropriate approving authority
- C) For the payment to the supplier
- D) Combination of (A) & (B)

33. Item not required for the purpose for which it was originally purchased is known as –

- A) Inactive item
- B) Scrap item

C) Over stock item

D) Emergent stock item

34. For an item having annual consumption equal to 600 nos. maxima and minima are respectively equal to 12 and 8 months consumption. Physical stock of this item on different dates was as under :

1.1.12 ----- 500 ; 1.2.12 ---- 450 ; 1.3.12 -----400 ; 1.4.12 ---- 300 ;

This item should have been recouped on

A) 1.1.12

B) 1.2.12

C) 1.3.12

D) 1.4.12

35 An item having regular turnover caused by constant demand will be known as –

A) Ordinary Stock Item

B) Emergency stock item

C) Regular item

D) Non- stock item

36. Inactive items are those stock items, stock of which

A) is unserviceable

B) more than 3 months old

C) has not been issued to any user for past 12 months

D) is more than the requirement of next 24 months

37. Principal Head of Stores Department on a Zonal Railway is –

A) Chief Materials manager

B) Chief Controller of Stores

C) Controller of Stores

D) Chief Controller of Stores and Purchases

38. Representatives of the tenderers are allowed to be present at the time of opening of -----

A) Single tender

C) Open tender only

B) Bulletin

D) Open or special limited tender

39. Processing of a tender case after the opening of tenders depends on –

A) Estimated value of purchase

B) Value of the case as per highest offer

46. Weekly Stores Bulletin is a type of

- A) Limited tender
- B) Special Limited Tender
- C) Open tender
- D) None of above

47. On a railway, the items have been classified as A, B, C and V, E, D. While designing stock level limits for various items, we will provide to keep minimum safety stocks for –

- A) A-V Items
- B) A- D Items
- C) C-V Items
- D) C-D Items.

48. Materials not required are returned to the nominated stores depot as per stores code para number

- (a) S - 1539
- (b) DS-8
- (c) NS-11
- (d) SS-11

49. Survey committee is appointed by the General Manager as a standing committee consisting of

- (a) Stores officer, Account officer, Electrical officer
- (b) Stores officer, Account officer, Mechanical officer
- (c) Stores officer, Account officer, S&T officer
- (d) None of the above

50. Disposal of scrap may be done by

- (a) Auction
- (b) Sale by tender
- (c) Sale to other Govt. department and undertakings
- (d) All above.

51. Custody stores are the stores –

- (a) Which are kept under the custody of indentor

(b) These are charged off stores but kept under the custody of stores depot awaiting future use.

(c) Custody stores are non stock items which are surplus with the user

(d) Custody stores are imprest stock items

52. Standardisation helps in

(a) Easy maintenance of equipment by suitable replacement

(b) It is easy for the supplier to manufacture the item with suitable technology

(c) Scale of economy can be achieved

(d) All of them as above

53. PL No. of an item is 98-05-0400. This item may be an item of

(a) Uniforms (b) Stationery (c) Steam Locomotive (d) Scrap

Indicate true or false-

1 In FAS contract, the export clearance of the goods is done by the seller.

2. In FOB contract, the obligation of the seller is fulfilled when the goods passes ships Rail.

3. CIF term is reserved for sea and inland waterways.

4. Loco wheels are imported items for Indian Railways.

5. In import shipments, the insurance of the Materials is arranged by Life Insurance of India.

6. Procurement includes purchasing but purchasing is not simple buying.

7. Negotiations is not a must in purchasing.

8. More is the inventory, more is the inventory carrying cost.

9. Less is the inventory, less is purchasing cost.

10. 100 % service level for all the items requires blockage of enormous capital.

11. Railways use significant method of coding for material description.
12. Stock items can be planned well in advance.
13. Non stock items cannot be planned.
14. Some non stock items can be planned.
15. Planning is possible only for M&P items.
16. For recoupment of emergency items Maxima / Minima method is adopted.
17. At EOQ point total cost of material is maximum.
18. Buffer stocks are provided to cater for fluctuations in lead-time but not fluctuations in consumption pattern.
19. In case of a rate contract rate is fixed but quantity is only approximate without specific commitment.
20. In running contract quantity is fixed but rate is not fixed.
21. Railways' bulk requirements of POL items, steel and coaching paints are processed by DGS&D.

Fill in the blanks –

1. For indenting and issue of imprest items, form ---- is mentioned in the stores code.
2. Form --- of stores code is the form of combined requisition and issue note.
3. Form S1302 of stores code describes ---- .
4. Consignee code is in ---- digits including check digit.
5. ----- digit is used to check the correctness of PL No.
6. Unit code is in --- digits.
7. Lead time is the time from --- to ----- .
8. Form ---- is prescribed to be used for returned stores.
9. Turning and boring in the workshops is an example of ---

10. Public auction is the most popular method of disposal of scrap because -----
-----.

11. Difference between inactive stores and surplus stores is -----
-----.

12. ----- % and ---- % of total cumulative annual usage value of stock items goes for -----
- and ---- category of items .

13. While studying ABC and VED category of items, tight and critical scrutiny of demands is required while calculating requirements of ----- and --- category of items.

14. In case of imports contracts agency commission to Indian agent is paid in Indian rupees based on ----- rate.

15. INCO terms stand for ----- .