

WAREHOUSE ORGANISATION STRUCTURE - ROLES AND RESPONSIBILITIES

In the previous lesson, you learned about the types of warehouses i.e. government, private, bonded. In this lesson we shall discuss warehouse Organisation structure and roles and responsibilities. In any business or trading activity warehouses are important tools for arrange supply of physical products from the producer or manufacturer to consumers. The warehouses must to ensure that goods are received promptly, accounted for accurately and stored safely until the deposit liquidate them. In this chapter students will understand that the warehouse Organisation structure depends on the type of services, type of commodities, capacity of the warehouse and customer requirements.



LEARNING OUTCOMES

After studying this lesson the learner:

- identifies the duties and responsibilities of warehouseman;
- analyzes importance of maintaining records for efficient warehousing;
- explains different handling operations in warehousing;
- summarizes the applications of technology in warehouse management;
- lists safety and security requirements in warehousing.

16.1 MANPOWER REQUIREMENT

Before we work on manpower requirements, we need to understand its activities. Following key functions are required to be performed in the warehouse:

- Management and control of the warehouse



- Maintenance of various records at strategic points
- Supervising the transactions
- Quality assessment, monitoring and various quality-related operations
- Safety and security of goods and premises
- Weighing of stock
- Finance related work
- Mechanics for any mechanised operation.

16.1.1 Job Description of Different Categories of Staff in a Standard Warehouse

Generally the warehouse requires various categories of staff based on the type of operations to be handled directly or by outsourcing to service providers. The key functionaries are as follows:

- Warehouse manager.
- Quality supervisor/assistant.
- Warehouse Assistant
- Security Guards

The job description of each cadre is briefed as under-

A. Warehouse Manager: A warehouse manager has a lot of responsibilities as in charge of the warehouse, to oversee both employees and physical goods, which include:

- a. Manage the warehouse in line with company's laid down procedures/ standards and to ensure adequate supervision over the entire operations undertaken at the warehouse by the concerned staff.
- b. Monitoring closely basic operations, such as receiving, warehousing, distribution, safety & security of the stocks and scientific preservation of stocks, up to date maintenance of records insurance of stocks, judicious use of the equipment, fumigants and other property of the warehouse.
- c. To effectively liaise with various stakeholders of the warehouse such as depositors, banks, service providers, local administration etc.
- d. To make sincere efforts for maximum utilisation of warehouse space, to customer.



- e. Maintain standards of health and safety, hygiene, and security by conducting periodic and surprise checks.
- f. To supervise the staff to maintain proper discipline and to ensure that there is complete cohesion and harmony among the staff as well as to inculcate team spirit, cooperation and ensure the entire staff working at the warehouse.
- g. In case of emergency, to exercise overall vigilance and exhibit due presence of mind in order to safeguard warehouse operations by following security procedures.
- h. To bring new customers to the warehouse.
- i. To provide required returns about all transactions (receipt, delivery) and detailed inventory to customers as per their requirement.
- j. To exercise administrative and financial powers as prescribed from time to time.

B. Quality Supervisor / Technical Assistant

- a. To draw samples for analysis of stocks received in the warehouse and ensure proper storage and maintenance of reference samples and related records.
- b. To analyze and grade of stock received in the warehouse. Check for any violations of the FSSAI Standards.
- c. To undertake regular stock health inspection at regular intervals.
- d. To undertake regular prophylactic treatment through appropriate chemicals at the desired dosage and frequency.
- e. To perform curative treatment (fumigation) of stocks for effective insect infestation control.
- f. To ensure proper shed hygiene and sanitation at all times.
- g. To undertake physical verification of stocks stored in the warehouse.
- h. To check the quality of stock at the time of issue vis a vis the reference sample.
- i. Perform regular checks and monitoring of various equipment and machinery and keep them in proper working condition

C. Warehouse Assistant

- a. To supervise a measurement of stock through different modes during receipt, delivery and other warehouse operations.

MODULE - 3

Introduction to Warehouse



Notes

Warehouse organisation structure - Roles and Responsibilities

- b. After checking that the right quantity and types of goods have been delivered and received, supervise the loading and unloading of the stocks from the trucks/ carrying vehicles.
- c. To sign the delivery form, once satisfied that the stocks are complete.
- d. To supervise the movement and stacking of the stocks to the correct area in the warehouse as per the approved stack plan.
- e. To keep records of stocks received, delivered and in storage with respect to their location and quantity.
- f. To arrange the-stacking of goods for delivery to depositors.
- g. To keep a record of internal stocks shifting.
- h. To prepare daily transaction reports for godowns under his charge.
- i. To assist in assessing the storage charges due and collection of the same from the depositor.
- j. To assist the warehouse manager in the financial management of the warehouse.

D. Security Guards

- a. To watch over and protect the warehouse against various threats, including vandalism, theft, illegal activity and terrorism.
- b. To thoroughly check the transport vehicle for the presence of any extraneous material such as stones etc. which may be used for manipulating the quantity of stock deposited in the warehouse.
- c. To check the condition of locks in the godowns and take note of/report any damages to the same.
- d. To survey various locations in the warehouse premises (use closed-circuit TV monitors if available in the warehouse), take note of risk-based happenings and report to the Warehouse Manager/ designated officials.
- e. If any security risks/incidents are mentioned in the handover report to the next security guard they should be properly recorded.
- f. To familiarise with the operation of different types of fire -fighting equipment deployed in the warehouse.



16.1.2 Requirement of Staff Based On Capacity

Manpower requirement is not static but decided based on commercial transactions and technical considerations. It is however necessary that the personnel selected for warehouse operations have adequate knowledge and expertise in the scientific storage of different goods/agricultural commodities. This is to be accepted for storage in the warehouse. Various institutes like Indian Grain Storage Management and Research Institute (IGMRI), Department of Food and Public Distribution, Government of India, NIAM, Jaipur, FCI, CWC, SWCs, WDRA, MANAGE Hyderabad are providing training on quality control and warehousing.

Efforts are made to provide adequate training to selected manpower from these institutes or any other government institutes, to improve operational efficiency. The minimum requirement for manpower based on the warehouse capacity as suggested by WDRA, is given below: (*Table: 16.1*)

Table: 16.1 Staffing norms as per WDRA

Storage Capacity of Warehouse (M.T.)	Upto 5000	5001-10000	10001-25000	Above 25000
Warehouse Manager	1	1	1	1
Technical Asst./ Jr. technical Asst.	1	1	2	3
Warehouse Asst.	1	2	4	5
Security Guards	4	4	6	8
Total	7	8	13	17

16.2 OBLIGATIONS AND RIGHTS OF WAREHOUSEMAN

16.2.1 Obligations of warehouseman

1. Warehouseman is bound to take as much care of goods entrusted to him as a man of ordinary prudence would, under similar circumstances and conditions, take of his own goods of the same type and value.
2. Warehouseman is bound, except for a lawful excuse, to deliver the goods on demand made by the depositor. This is subject to surrender of the warehouse receipt, payment of storage charges and other dues of the warehouseman and acknowledgement of delivery of the goods.

MODULE - 3

Introduction to Warehouse



Notes

Warehouse organisation structure - Roles and Responsibilities

3. Warehouseman is liable to deliver the goods according to the original tenor of the warehouse receipt even if it is altered subsequently without any authority.
4. Warehouseman may deliver part of the goods at his discretion if required by the depositor. When, part delivery of the goods is made for which a negotiable warehouse receipt has been issued, the warehouseman shall make a statement on the warehouse receipt giving particulars of the goods which have been delivered.
5. Warehouseman is liable for the value of the goods to the depositor or to the holder of a warehouse receipt in due course for the non-existence of the goods or the goods not corresponding with the description given in the warehouse receipt at the time of issue.
6. The liability of a warehouseman in the case of loss, destruction or damage to goods while in his custody is limited to the value of the goods on the date of their deposit in the warehouse.
7. Warehousemen may store fungible goods with other similar goods of some kind and grade with the depositor's consent.
8. Each warehouse receipt must be arranged to allow easy identification and delivery of the goods when required by the depositor without undue delay and handling.
9. If the warehouseman is satisfied that any lot of goods will deteriorate in value or injure other property, he is required to give notice to the depositor. This notice requires him to satisfy the lien upon the goods and remove them from the warehouse.
10. To supply a certificate if requested by a depositor on payment of the prescribed fee. This will indicate the condition of his goods stored in the warehouse.
11. None other than the depositor can claim right over any increase in weight of accepted goods due to moisture absorption.

16.2.2 Rights of warehouseman

1. Warehouseman is not responsible for any loss, destruction, damage or deterioration of the goods delivered to him for storage which arises from force majeure, act of public enemies, attachment of seizure under legal process, natural deterioration, shrinkage or loss in bulk or weight due to inherent or latent defects in the quality of goods or packages and such other unforeseen reasons as are not specifically covered by insurance.
2. The goods covered by a warehouse receipt and in the possession of a warehouseman may not be attached in execution except by seizure of the warehouse receipt or by lawful process, relating to the goods.



3. Warehouseman holds a statutory lien on the goods and also on the sale proceeds of such goods. This lien is to recover his charges for storage, preservation, handling and sale of goods by auction or disposal of goods where so required. If the goods are sold or disposed of after following the prescribed procedure, the warehouseman cannot be called upon to deliver the goods to the depositor.
4. Warehousemen may refuse to deliver the goods to the person demanding delivery of until his lien is satisfied.
5. Warehouseman may realise his warehouse charges by sale of the goods. This is after giving written notice to the depositor and to other persons who have some interest in the goods.
6. Even when not required under law, the warehouseman may insure the goods against risks of fire, theft, floods and other risks. In the event of doing so, collect insurance cost from the depositor.
7. Warehousemen may decline to accept goods which are likely to cause injury, damage or deterioration to other goods in storage. This is without them being first reconditioned and made fit for storage by the depositor at his cost.
8. Warehousemen cannot be called upon to deliver the goods except during normal working hours. He be required to deliver the goods to a place other than the warehouse.
9. Warehousemen may dispose of by public auction or otherwise the goods that cannot stand further storage or are likely to damage or injure other goods in storage. This is the same are not lifted by the depositor on being instructed to do so by the warehouseman.
10. Warehouseman may require the depositor to make a pallah of the goods at his cost to ensure quality uniformity before storage. He may also shift the goods from one godown to another godown if considered necessary for proper preservation of the same. He may also recover the expenses from the depositor.
11. If there is any driage, shrinkage or loss in weight in the goods stored in the warehouse on account of evaporation of moisture or other causes beyond the control of the warehouseman, he cannot be made liable for the same.

16.2.3 Requirements from licensed warehouseman

1. Exhibited in a prominent place in the warehouse the licence granted to him for warehousing. The licence is required to be renewed every year and can be revoked or canceled by the licensing authority. This is for reasons to be specified by him in writing.

MODULE - 3

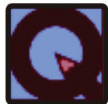
Introduction to Warehouse



Notes

Warehouse organisation structure - Roles and Responsibilities

2. Display in bold letters the warehouse working hours to indicate when the goods can be deposited, received and delivered.
3. Exhibit conspicuously a copy of his current rules and approved schedule of charges along with a translation in the local language.
4. Accept goods on a '*first come-first served*' basis and not show undue preference to any one. However, he may levy such charges for storage as may be agreed upon between him and the depositors. This is subject to the limits, if any, prescribed by the licensing authority.
5. Warehouseman is prohibited, either on his own account or that of others, to deal in or lend money on the goods he receives in his warehouse.
6. If the warehouse receipt is lost, destroyed, torn, defaced or otherwise becomes illegible, the warehouseman is required to issue a duplicate warehouse receipt. This is the manner prescribed for the purpose.
7. Exercise such care in keeping distinct the produce of each depositor as will enable him at all times to identify it and deliver it without undue delay. Goods of different classes or grades or qualities shall normally be stored separately.
8. In the event of any fire or loss or damage to goods stored in the warehouse, the warehouseman is required to inform the depositor and the prescribed authority of the same.
9. To maintain a system of accounts as approved by the prescribed authority for the purpose and keep all records, books and papers in a safe place.
10. To submit to the prescribed authority, from time to time, such reports as are required by him with regard to the warehouse business.



INTEXT QUESTIONS 16.1

1. Manpower requirement in the warehouse should be determined based on-
 - a. Commercial transactions
 - b. Technical considerations.
 - c. Capacity of depot.
 - d. All of the above.



2. Warehouseman is bound, except for a lawful excuse, to deliver the goods;
 - a. On demand made by the depositor
 - b. Subject to surrender of the warehouse receipt,
 - c. Payment of storage charges.
 - d. All of the above.

3. The main activity of the warehouse includes:
 - a) Quality assessment, monitoring and various quality-related operations
 - b) Safety and security of goods and premises
 - c) Maintenance of various records
 - d) All of the above

4. Part delivery of the goods hypothecated with the banks to the specified extent can be done by the warehouseman after clearance from the bank. - True/ False

16.3 RECORD MANAGEMENT

Warehouse companies, generally, devise a standard operating procedure (SOP) for documenting the sub-activities undertaken at the warehouse level during deposit and/or withdrawal of commodities. These SOP are in the form of various Forms and Formats used for recording the “Transactional Details” involved in the process of physical transactions of deposits and withdrawal of the commodity from warehouse and normally are applicable in all lease, franchise, stock management and lease franchise type of warehousing arrangements at all storage locations. A summary of some of the forms, formats and registers used for recording standard operating procedures is provided below:

A. Forms/ Registers

- Application for deposit of commodity and its components.
- Commodities withdrawal application form and its essentials.
- Day truck transaction report – mandatory capturing of information.
- Monthly warehouse activity report on quantity, quality and related activities.
- Warehouse supervisor – dairy and weekly progress report.



- Warehouse access register – controlling access to storage area during inward and outward movement of commodity and quality preservation activities.
- Daily Truck Transaction Register cum Asset Tracker (two-in-one register)

B. Forms & Formats**a. Application for Commodity Deposit**

Whenever a client is interested in deposit his stock in any warehouse, a deposit application for the commodity to be deposited is required to be submitted to the warehouse manager. The deposit document consists of the following points:

- Name of the commodity
- Complete description of the commodity with its grade or quality
- Declaration about number of packages and likely quantity to be stored
- Declaration with reference to distinguishing marks, if any
- Declaration about packing material and total weight of the consignment.
- Depositor has to specify whether the commodity deposits shall be done by him or by his agent.
- Depositor has to declare that the goods mentioned in the application form are his / her bona fide property and no other person has a claim against them.
- Depositor / agent has to declare the full name and address of the owner of goods / depositor / agent along with the contact telephone number.
- For future records, the depositor must have provide duly verified photo identification proof of himself or his agent. Attestation of specimen signature cards can be organised through the bank/ notary manager.
- Duly filled and signed (with seal) application form should be submitted by the owner / depositor of the commodity to the warehouse manager prior to bringing in the commodity to the warehouse. The warehouse manager will keep it in his records for future reference and for of internal and external audits.

C. Gate Pass

At the entrance to the warehouse, the waybill is collected from the driver whenever a loaded truck enters the warehouse premises. At the time of exit of the truck, a gate pass issued by godown staff to the driver is verified and copy retained by the security staff. At



both entry and exit security enters all details regarding the cargo and the truck in the Gate Register.

D. Sample Slip

- Samples drawn from the stack should be placed in sample bags for analysis and grading. Details of the sample are recorded in a sample slip and get authenticated by the depositor/his authorised representative.
- Maintain a file of sample slips at the warehouse and enter the details in the appropriate module of Stock Accounting Software of the warehouse company.

E. Withdrawal of Commodities

The procedure for withdrawal of stocks from the warehouse for deposits not having availed any funding against commodity, is as mentioned below –

- Collect original warehouse receipt from client
- Collect warehouse charges as per book of entries
- Prepare the ad-hoc invoice and cash receipt
- Deposit the cash/cheque in the designated bank
- Release the commodity
- Print the system generated withdrawal document and obtain the client's signature and handover.

The procedure for withdrawal of stocks from the warehouse for deposits not having availed funding against commodity, is as mentioned below –

- Collect original pledge release document issued by the bank.
- Make withdrawal entry in Stock Accounting Software of the warehousing company.
- Print the system generated withdrawal document and release the stock.

F. General instruction on record management

Some of the general instructions required by warehousemen for efficient warehousing operations and record management are as provided below -

- The warehouse manager records all the details at all times with reference to

MODULE - 3

Introduction to Warehouse



Notes

Warehouse organisation structure - Roles and Responsibilities

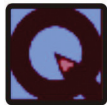
every transaction of deposit and withdrawal of commodity/ goods transacted from the warehouse. This is done manually in prescribed registers of the warehousing company as well as in stock accounting software of the company, if provided.

- During all times the warehouse manager must record on the form under his signature and collect the counters signature of the depositor/ authorised signature.
- The warehouse manager is required to complete all entries and submit them for further correct replication into the warehouses electronic software as defined in the procedure.
- All deposits/withdrawals moving in/out of a warehouse to be maintained in the prescribed form (like DTS-Daily Transaction Slip) with information on depositor, agent/ supplier, commodity, packaging material (jute/plastic), carrier details, warehousing company gate pass no., weighbridge details and general quality parameters, etc.
- The transactional details are recorded in three copies, namely original and two duplicate (carbon) copies. The original is handed over to the depositor or his authorised representative at the completion of physical transactions at the warehouse. The carbon copy is provided to the warehousing company's local office for its entry into the stock accounting software while the second carbon copy is retained and maintained at the warehouse level with the warehouse manager for his stock accounting activities as well as for internal and external audits in the future.
- Warehouse manager is required to undertake periodic reconciliation of physical stocks with his warehouse records as well as cross checking of entries in the stock accounting system. This is for maintaining accurate inventory records at all times.
- Warehouseman is required to fill in a Daily/Weekly/Monthly warehouse activity report in a chronological manner, date-wise to maintain the sanctity of record keeping under good book keeping practices without any blanks/spaces and cutting or overwriting. Spillages in the godown need to be collected, cleaned, filled in pallah bags and accounted for properly.
- Details pertaining to opening balance, deposits, withdrawal, and spillage/made up bags and other quality issues, if any, should be in clear numbers (weight, number of bags) and should strictly be date wise.
- All the activities related to preserving warehouses stocks viz. A warehouse spraying



and fumigation need to be tracked in sequential order, while capturing accurate information about manpower and other resources (chemicals, machine, etc.).

- Date-wise details of temporary/ casual labourers hired for warehouse cleaning/other operations.
- Date-wise details of security deployment in terms of number of guards, duty shift details like day and/or night or first, second or third shift with details of relievers/roasters and number of days present.
- Preparation of a monthly warehouse activity report is the base document for recording all the transactions/ activities undertaken at a warehouse during a particular period. The correctness of each entry is of the utmost importance. Any lapses in the same may result in incorrect stock accounting and preparation of incorrect income and expense statements for the said period.



INTEXT QUESTIONS 16.2

1. The process which is a part of SOP is:
 - a. Deposit and Delivery
 - b. Storage
 - c. Risk Management
 - d. All of the above.
2. Acceptance of damaged stocks in the warehouse can be:
 - a. Done after reconditioning at the cost of the depositor.
 - b. Done after reconditioning by warehouse at its cost.
 - c. Can be denied
 - d. None of these.
3. Pala bags are used in food-grain godowns:
 - a. to fill sound grains at the time of receipt.
 - b. to fill sound grains at the time of delivery.
 - c. to fill spilled grains in the godown.
 - d. None of these.



16.4 TECHNOLOGIES CONCERNING THE MANAGEMENT OF WAREHOUSE OPERATIONS

Today's warehouses are driven by the information technology revolution. Massive integration of IT systems with various warehouse operations has greatly contributed to the efficiency, speed and accuracy of various warehouse transactions. These systems may be elaborated as follows:

A. Warehouse management systems (WMS) - The Warehouse Management System (WMS) is a complete warehouse operation application developed on a suitable software platform which capture various transactions during deposit, storage and delivery of warehoused goods. A WMS facilitates tracking inventory, transactions and data about the goods stored by providing a complete audit trail of various operations. Integration of WMS with the electronic Negotiable Warehouse Receipt (e-NWR) repositories makes the entire warehouse operations safe and secure thus resulting in greater customer satisfaction.

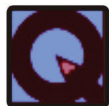
B. Automated Storage and retrieval systems - Automated storage and retrieval systems (AS/RS) are computer- and robot-aided systems which help in quick recovery of goods from specified locations in the warehouse. These involve digitization of both floor/vertical space in the warehouse, channels for material handling systems movement and suitable computer application to manage the same. The goods are automatically moved to bins, shelves or other predefined storage location depending on their size, number of units and the volume. In addition, they are automatically moved to the availability of slots in the warehouse space. The handling machinery is either crane mounted, or robot enabled to facilitate carrying the goods to a specified location. It retrieve items or store them in specific locations.

a. Benefits of Automation

- Quick movement with accuracy.
- Reduced labour cost
- Least damage to packages
- The lesser risk to manpower
- Easy handling under different situations.
- Better space utilisation.

C. Tracking and tracing solutions – In order to ensure the safety of goods in the

warehouse, it is imperative to important a system for tracking and tracing the movement of packages in the warehouse and outside. While warehouse management applications like Real Time Warehouse Control Systems (RTWCS) and Computer Integrated Warehousing (CIW) solutions facilitate proper tracking of the position of various packages in the warehouse, there are some specific applications like Bar Coding, Quick response (QR) coding and Radio-Frequency Identification Devices (RFID) which serve the purpose.



INTEXT QUESTIONS 16.3

Fill in the blanks

1. Automated storage and retrieval systems (AS/RS) are computer- and robot-aided systems that help in quick _____from specified locations in the warehouse.
2. _____is a complete warehouse operation application developed on a suitable software platform. It has provisions to capture various transactions during deposit, storage and delivery of the warehoused goods.

16.5 SAFETY AND SECURITY OF AGRICULTURAL PRODUCE

A. Accepting Stock

When agricultural produce is reviewed in the warehouse for storage, it must be carefully inspected. In case of bag storage special attention needs to be given to identification of slack, torn, wet and damp bags.

B. Action points

- Slack bags to be filled to standard weight.
- Torn bags need to be stitched or replaced to avoid further grain spilling.
- Damp or wet bags have to be opened out and grain needs to be dried and earmarked and stacked separately for early disposal. In no case should damp or wet bags to allowed to go into a regular stack.
- Infested bags need to be stored in an isolation shed wherever possible or away from pest free stocks and fumigated immediately.



MODULE - 3

Introduction to Warehouse



Notes

Warehouse organisation structure - Roles and Responsibilities

- Damaged stocks should not be accepted in the warehouse until they are reconditioned and conform to quality parameters.
- In case of grain being dried in the sun, it should be allowed to cool down before being re-bagged and stored.
- Representative samples of 2 kg are drawn from each lot of the appropriate size. This is called a 'composite' or 'bulk' sample. It shall be examined for the general stocks condition, infestation, admixture and impurities. The composite sample is divided into 4 parts and 500 grams are analysed. The stocks are classified and categorized to know the level of infestation and stock condition respectively. The stocks are also graded based on the Agricultural Produce (Grading and Marking) Act 1937. The observations are required to be captured in the Analysis and Grading register, stack card and in stock-inward-reports, which is to be duly acknowledged by the representative of the depositor for its final impression on "Warehouse Receipt" issued by the warehouse for the said stock.

As a routine measure, agriculture produced on receipt in the warehouse needs prophylactic treatment as per prescribed drill. Moisture content of the incoming produce needs to be determined and recorded in the relevant registers and records. This must be duly authenticated by the depositor or his authorized representative.

C. General Precautions

It is important to understand the compatibility of different commodities brought to the warehouse for storage. It is not advisable to store incompatible commodities together to avoid contamination as briefed below-

- Grains and pulses are required to be kept separately.
- Stocks of fertilizers, pesticides and other industrial products like cement should not be kept along with agricultural produce like wheat / paddy / pulses / oilseed within the same storage space.
- Hygroscopic commodities (commodities that absorb atmospheric moisture) like sugar must be kept separately.
- Storage of cotton bales identified as hazardous commodities is preferred in separate chambers in warehouses and not with food grains.
- Spices also require separate chambers to avoid loss of the original aroma contamination.
- Similarly other soft grains like Maize, Jowar, Bajra, Sorghum, etc. are more susceptible to increased insect and fungal infestation and microbial damage and therefore call for additional attention during storage.

- Milled products such as Atta, Maida and Suji being more susceptible to atmospheric moisture and insect infestation damage require special attention.
- It should be labelled as “Damaged” and kept separately if damaged stock/grain has been received or identified after salvaging/reconditioning.

Procedure for reconditioning or salvaging operation

Deteriorated and damaged grains received in any warehouse should be treated or reconditioned expeditiously to avoid decomposition of wet stocks and to avoid complete loss of value as per procedure given below-

- Cutting open bags and separating out sound stock from damaged stocks (grains, kernel).
- Spreading of damaged kernels in a thin layer for aeration and drying.
- Where necessary, the grain needs to be passed through a mesh and sieve of appreciated size to clean/ segregate of foreign matter.
- As soon as sound produced/grain is received, it should be re-bagged in separate gunny bags for routine disposal through normal/ other good stocks in the warehouse. The damaged portion of commodity/ grain must be transported to the isolation shed of the recording its weight and expenses. For necessary stock accounting and financial accounting formalities before its final disposal at reduced commodity price. This is as per the prescribed accounting standards of the warehousing company.

16.6 WAREHOUSE SECURITY MANAGEMENT

Security risks could be from both internal and external sources. Internal threats could be caused by own employees and third parties hired by the Organisation, while external threats would involve anyone else who enters the warehouse without authorization with the intention of burglary, theft etc. Proper security arrangements in the warehouse are essential to avoid theft/burglary. Basic requirements include a proper locking system, installation of security gadgets, deployment of security guards, etc.

The warehouse shall have foolproof security arrangements round the clock with adequate security guards, equipped with appropriate equipment for guarding the warehouse. Security guards can be managed through service providers. Warehouse officials shall ensure that security guards are rotated as far of the possible.

A. Training needs of security staff

Warehouse official shall ensure that security guards are adequately trained in terms of





following aspects:

- Adequate patrolling.
- Observation of doubtful activities.
- Handling of communication equipment.
- Handling of safety equipment.
- Contact details of local police, fire brigade and civic authorities to manage emergencies.

Record of entry or exit in the warehouse along with time of all vehicles/ persons be maintained. The warehouseman shall ensure that all important keys are kept in safe custody and only authorized personnel have access to withdraw the keys. Keep duplicate keys of all godowns in safe custody, preferably banks. The warehouseman shall ensure that before closing the office, the number of keys is verified and in case of any deviation, appropriate actions shall be taken.

B. Fire Fighting System:

Warehouses are generally packed with different types of commodities which may include non-hazardous, hazardous or even extra hazardous commodities, which are prone to fire risks at all times if safety precautions are overlooked. Warehouse buildings must be constructed as per the safety code of conduct. It is the prime responsibility of the warehouse manager to ensure that all the stocks in the warehouse and available facilities are kept safe from losses due to fire hazards. All safety measures need to be meticulously followed to avoid fire outbreaks in the premises. Signage on directions, safety and relevant information to ensure disciplined and smooth movement of personnel, vehicles and materials must to be provided.

Apart from damages to stocks, emerging smoke, heat or flames from fire accidents can also cause employee injury. It is necessary to effectively mitigate warehouse fires as follows:

- Adequate fire fighting equipment as per norms.
- In case of hazardous goods storage a fire sprinkler system with an adequate water storage tank required.
- Provision of fire suppression systems, such as sprinklers, fire doors, and fire extinguishers.
- Fire alarm system and fire alarm monitoring
- Emergency lighting
- The fire control procedures should be fully documented, shared publicly, and practiced regularly.

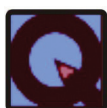


The above elements work together to protect the warehouse from fire risks. To draw fire protection plans, Warehouse equipment must be assessed by experts based on building type, capacity and types of hazards. The capacity wise standard requirement of fire extinguishers and fire buckets for normal commodities is (*Table: 16.2*), however the requirement may be doubled in case of hazardous goods.

The warehouseman and other staff of the warehouse should be trained on the basic principles and general procedure of fire fighting in a warehouse. Warehouse officials must ensure that all fire fighting is in working condition.

Table: 16.2 Norms of Firefighting equipment as per CWC guidelines.

S. No.	Capacity of the godown(MT)	No. of fire extinguishers to be provided	No. of fire buckets to be provided
1.	Below 3000	3	15
2.	3001-5000	4	20
3.	5001-10000	6	30
4.	10001-15000	8	40
5.	15001-25000	10	50
6.	25001-50000	15	75
7.	50001-75000	25	125



INTEXT QUESTIONS 16.4

1. Fill in the blanks
 - a. _____ are responsible for watching and protecting the warehouse against various threats, including vandalism, theft, illegal activity and terrorism.
 - b. Damp or wet bags received in the warehouse need to be earmarked and stacked _____ for early disposal.
 - c. Sampling at the time of receipt helps in _____ determination.
2. Choose a correct or incorrect statement-
 - a. Fertilizers and food grains must be stored separately.
 - b. Sugar and wheat stocks can be stored in the same godown.

MODULE - 3

Introduction to Warehouse



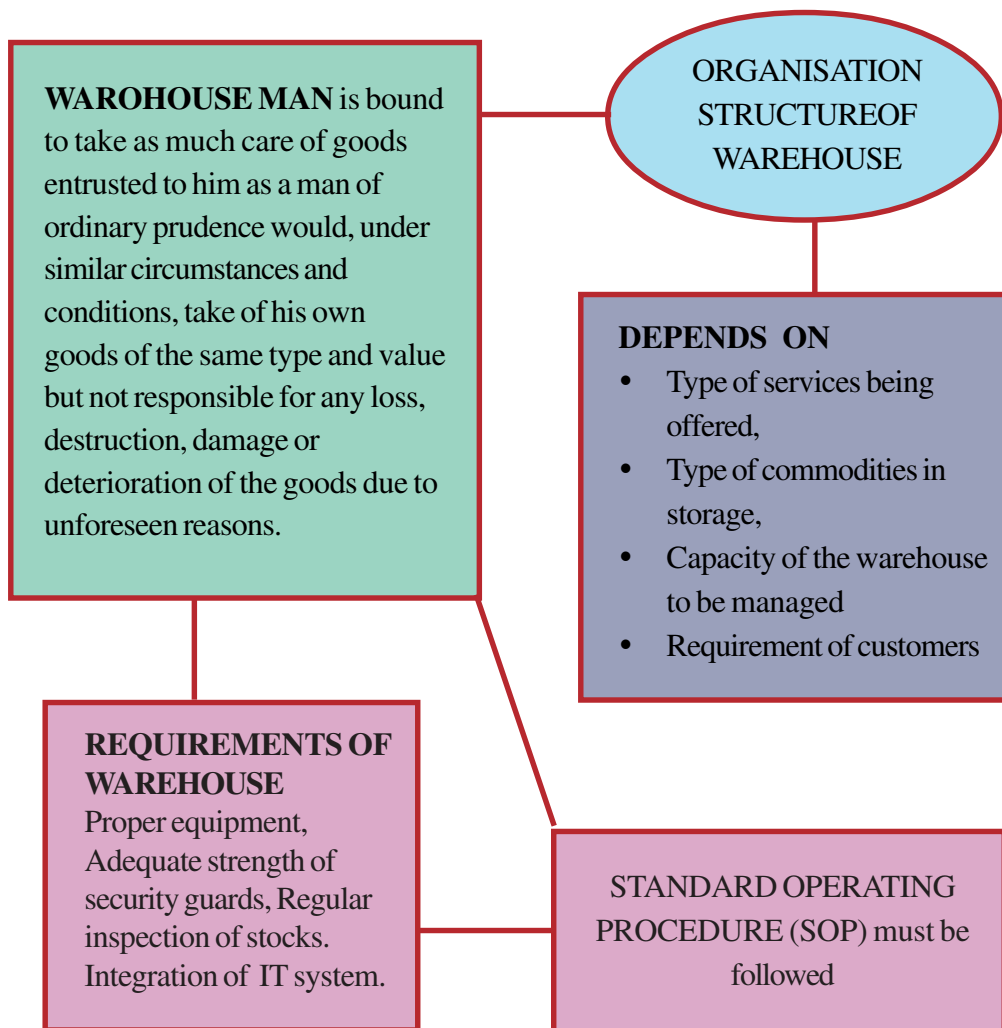
Notes

Warehouse organisation structure - Roles and Responsibilities

- c. No need to spend time and money on training as staff can pick up from routine working.
3. Choose the correct statement about the need for sampling of food grains.
- Sampling is an essential part of the inspection process and is critical to the accuracy of the final grade
 - Batches of grain are rarely uniform in quality even when regarded as acceptable
 - Both a & b are correct.
 - Both a & b are incorrect.



WHAT YOU HAVE LEARNT





KEY TERMS

Liquidation of stocks Natural deterioration
Organisation structure Quality parameters, Security
Standard operating procedure unforeseen reasons

Notes



TERMINAL EXERCISE

1. What is the full form of IGMRI?
2. How many fire extinguishers are required in a warehouse with a capacity of 6000 mt?
3. Who determines the quality of stocks in the warehouse?
4. What is the full form of SOP?
5. Cotton bales are a non- hazardous commodity (True/ False).
6. Write a short note on the various functions performed by trained manpower in the warehouse?
7. Write a short note on the important duties and responsibilities of a warehouse manager?
8. What is the difference in duties of a quality assistant and warehouse assistant?
9. What do you understand from the Warehouse Management System (WMS)?
10. What are the advantages of automated storage and retrieval systems (AS/RS)?
11. List a few steps required by warehouse staff at the time of goods acceptance?
12. Briefly describe the reconditioning procedure in case of deposit of damaged food-grains in the warehouse?
13. Why do we require fortnightly inspection of food grain stocks?
14. Briefly discuss the training needs of security staff in the warehouse?
15. Why do we require fire -fighting equipment in the warehouse?
16. How records maintained in the warehouse? State why they are necessary?

MODULE - 3

Introduction to Warehouse



Notes

Warehouse organisation structure - Roles and Responsibilities

17. Explain the role of safety and security of agri products in the warehousing operation starting from receipt of stocks till liquidation.
18. Discuss safety and security needs in the successful warehouses management?
19. Explain the duties and responsibilities of warehouse manager, quality assistant and warehouse assistant?
20. What happens if damaged stocks are stacked along with sound stocks? What precautions and measures are necessary to ensure safe storage?



ANSWERS TO INTEXT QUESTIONS

16.1

1. d 2. d 3. d 4. a

16.2

1. d 2. a

16.3

- a. recovery
b. Warehouse Management System

16.4

1. a. Security guards b. separately c. quality
2. a. true b. false c. false
3 c



DO AND LEARN

Imagine you are setting up a warehouse of 10000 mt capacities to store wheat, sugar and fertilizers. What type of manpower and security measures are required for successful operations particularly if you are required to receive even damaged stock.