



BASIC TEXTILE OPERATION NTQF Level I LEARNING GUIDE #21

Unit of Competence	: Operate Load Shifting
	Equipment
Module Title: -	Operating Load Shifting
	Equipment
LG Code:	IND BTO1 M07 LO1-LG21
TTLM Code:	IND BTO1TTLM 0919 v1

LO1.Perform pre-checkup of equipment





Instruction Sheet Perform pre-checkup of equipment LO1

This learning guide is developed to provide you the necessary information regarding the following learning outcome content coverage and topics –

- 1. Perform pre-checkup of equipment
- 1.1 Selecting load shifting device
 - 1.1.1 Carts
 - 1.1.2 Overhead cranes
 - 1.1.3 Trolleys
- 1.2 Undertaking pre-use checks
- 1.3 Reporting non-compliance with specifications
- 1.4 Preparing, starting and using load shifting device
- 1.5 Stopping or shutting download shifting device
- 1.6 Performing minor maintenance and cleaning

This guide will also assist you to attain the learning outcome stated in the cover page. Specifically, upon completion of this Learning Guide, you will be able to –

- Select load shifting device based on type of work.
- Undertake pre-use checks in accordance with manufacturer specifications and regulatory safety requirements.
- Report non-compliance with specifications for repair or replacement.
- Prepare, start and use Load shifting device in accordance with all safety and enterprise standard procedures.
- Stop or shut down Load shifting device in accordance with all safety and enterprise standard procedures.





 Perform minor maintenance and cleaning in accordance with manufacturer's specifications and/or enterprise procedures.

Learning Instructions:

- 1. Read the specific objectives of this Learning Guide.
- 2. Follow the instructions described in number 3 to 7.
- 3. Read the information written in the "Information Sheets 1". Try to understand what are being discussed. Ask you teacher for assistance if you have hard time understanding them.
- 4. Accomplish the "Self-check 1"
- 5. Ask from your teacher the key to correction (key answers) or you can request your teacher to correct your work. (You are to get the key answer only after you finished answering the Self-check 1).
- If you earned a satisfactory evaluation proceed to "Information Sheet 2". However, if your rating is unsatisfactory, see your teacher for further instructions or go back to Learning Activity #1.
- 7. Submit your accomplished Self-check. This will form part of your training portfolio.





Perform pre-checkup of equipmentLO1

Introduction

Art and science of conveying, elevating & transporting of materials starting from the time, the raw material (such as fiber's for spinning unit or yarns for weaving/ knitting unit and fabrics for wet processing or garmenting units) enters the mill gate and goes out of the mill gate in the form of finished products.

1.1 Selecting load shifting device

The choice of particular equipment depends upon specific requirements or the condition of an industry. The following factors should be taken into account:

A. Type/shape of materials to be transported:

The size of material, its shape, weight, delicacy and its chances of getting damaged during handling etc. should be considered.

B. Mill building and layout:

The route of material movement, width of doors and aisles, inequality in floor levels, height of the ceiling, strength of floor and walls, columns and pillars etc. to a great extent influence the choice of a material handling equipment.

C. Machine production:

Different machines have different outputs per unit time. Load shifting equipment should be able to handle the maximum output.

D. Type of material flow pattern:

A horizontal flow pattern will need trucks, overheads bridge cranes, conveyors etc. whereas a vertical flow pattern will require elevators, conveyors, pipes etc.

E. Types of production:

The selection of the material handling equipment depends a great extent on type of production such as: mass production and batch production. Conveyors are more suitable for mass production on fixed routes and powered trucks for batch production.





F. Other factors: Some other factors also considered during selection of load shifting equipment. These are: cost of load shifting equipment, handling costs, life of the equipment and amount of care and maintenance required for the equipment.

1.1.1 Carts

Cart is a strong open vehicle with two or four wheels typically used for carrying loads and pulled by a horse.

1.1.2 Overhead cranes

Overhead crane is a large machine that moves heavy things by lifting them in the air. They can handle heavy material through overhead space. However, they can serve only a limited area. Hoists are of tree type: electrical, chain type and pneumatic.



1.1.3 Trolleys

Trolley is a small vehicle with two or four wheels that you push or pull to transport large or heavy objects.









Figure 1: 2-wheeled industrial trucks/trolleys



trucks/trolleys

1.2 Undertaking pre-use checks

The most appropriate load shifting equipment is selected based on the types of work. Routine checks the equipment in accordance with manufacturer specifications & safety regulations.

Safety regulations are regulations to avoid the risks & hazards that may result during the operations. The risk that may occur includes:

- The risk of load drop/fail on the operators
- Risks of body injure by rotating parts of the equipment & etc.

1.3 Reporting non-compliance with specifications

During the operation with load shifting equipment's, we use operation manual of the equipment. If there is non-compliance with this manual or preset specification, report to the concerned body for repair or replacement.

1.4 Preparing, starting and using load shifting device

When operating automatic load shifting equipment, the equipment first prepared for the operation. Then, the equipment started according to safety & company standards.





1.5 Stopping or shutting download shifting device

After completion of the operation, the equipment is stopped. In addition to this when the load shifting equipment faces certain problem it must be stopped in order to find the problem and fix the solution for the finding.

1.6 Performing minor maintenance and cleaning

Minor maintenance is the process of repairing damaged parts of load shifting equipment.

E.g. Repairing/replacing broken handle of load shifting equipment

Why cleaning the surface of load shifting equipment?

Because the dusts occupied the surface of any machine deteriorate the surface of machine as a result the life span of the machine will be reduced.





Self-Check of Learning Guide #1(A)

Short Answer

I. Instructions: Give short answer for the following questions

QUESTION.1.what are a great extent influence the choice of a material handling

equipment.

2. Why cleaning the surface of load shifting equipment?

3.Define Minor maintenance means.

4.write Selecting load shifting device factors

Self-Check of Learning Guide #1(B)	Matching
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Instructions: Match column "A" with the descriptions in Column "B". Write the letter of the correct answer on the space provided before the No

COLUMN A	COLUMN B
1. Overhead crane	A. strong open vehicle with two or four
2. maintenance	wheels
3. dusts	B. machine deteriorate
4. Cart	C. Repairing/replacing
	D. lifting them in the air.

Note:	Satisfactory Rating: 51%	Unsatisfactory	Below: 51%
		Rating:	

You can ask your teacher for the copy of the correct answer.

Answer Sheet for Matching Self check

Score =	
Rating:	





BASIC TEXTILE OPERATION NTQF Level I LEARNING GUIDE #22

Unit of Competence	: Operate Load Shifting
	Equipment
Module Title: -	Operating Load Shifting
	Equipment
LG Code:	IND BTO1 M07 LO2-LG22
TTLM Code:	IND BTO1TTLM 0919 v1

LO2.Operate and monitor load shifting equipment





Instruction Sheet 1 Operate and monitor load shifting equipment lo2 This learning guide is developed to provide you the necessary information regarding the following learning outcome content coverage and topics –

1. Operate and monitor load shifting equipment

2.1 Operating load shifting device

- 2.1.1 Front end loader/back hoe
- 2.1.2 Ride on forklift and pallet trucks
- 2.1.3 Fixed and attachable job arms
- 2.1.4 Store traveling cranes and chain blocks

2.2.Lifting load

- 2.3.Ensuring placing loads
- 2.4. Selecting and using safe and efficient movement path
- 2.5. Checking and monitoring obstacles and hazards
- 2.6.Applying environmental requirements and procedures

This guide will also assist you to attain the learning outcome stated in the cover page. Specifically, upon completion of this Learning Guide, you will be able to –

- □ Operate load shifting device within design specifications and safe working load.
- □ Lift load ensuring balance, vision of operation and protection of load.
- Place loads ensuring safety and stability and ensuring safety of materials and avoidance of hazards on site
- □ Select and use Safe and efficient path of movement as per the manual.
- Check and monitor Path of movement for obstacles and hazards and maintained safety.





Apply Environmental requirements and procedures concerned with waste, pollution and reprocessing of materials correctly at all stages of the process

Learning Instructions:

- 1. Read the specific objectives of this Learning Guide.
- **2.** Follow the instructions described in number 3 to 10.
- **3.** Read the information written in the "Information Sheets 2". Try to understand what are being discussed. Ask you teacher for assistance if you have hard time understanding them.
- 4. Accomplish the "Self-check 2"
- 5. Ask from your teacher the key to correction (key answers) or you can request your teacher to correct your work. (You are to get the key answer only after you finished answering the Self-check 2).
- **6.** If your rating is unsatisfactory, see your teacher for further instructions or go back to Learning Activity #2.
- **7.** Submit your accomplished Self-check. This will form part of your training portfolio.
- 8. Read the information written in the "Information Sheet 2". Try to understand what are being discussed. Ask you teacher for assistance if you have hard time understanding them.
- **9.** Accomplish the "Self-check 2"
- **10.** Ask from your teacher the key to correction (key answers) or you can request your teacher to correct your work. (You are to get the key answer only after you finished answering the Self-check 2).





Information Sheet #2

Operate and monitor load shifting equipmentLO2

Introduction

Load shifting equipment operation is simply letting the load move from one place to other place by different mechanisms as per specification given on their manual. Example: using cranes, forklift, trolleys.....

Monitoring load shifting equipment on other hands; controlling the above listed tools when they are under operation.

1.1 Operating load shifting device

The equipment is operated with in design specifications & safe working load. This means, the equipment designed for shifting blow room materials used only in blow room; the equipment designed for shifting beam also used for beam, not for cone.

S.N o	Process	Material	Material handling equipment
1	From supplier to mill	Cotton/polyester	Truck or train or ship
		in bale form	
2	From truck to store	Bale of raw	Manual 2, 3 or 4 wheeled truck
		material	
3	Raw material store to	Bale	Manual 2, 3 or 4 wheeled truck
	mixing section		
4	Mixing to blow room line	Loose cotton	Special designed trolleys or lattice or
			suction
5	Blow room to card	Laps or loose	Specially designed trolley or Air pipe
		cotton	conveyor and chute
6	Carding to draw Frame	Sliver cans	Manual trolley or cans fitted Castrol
			wheels
7	Draw Frames to Speed	Sliver cans	Manual trolley or cans fitted Castrol
	Frame		wheels

A. Types of load shifting equipment used in the spinning mills:





	1									VELP	
8	Speed	frame	to r	ring	Roving bobbins	Man	ual	trolley/Ta	apa o	or	special
	frame					desig	gned t	rolley			
9	Ring fra	me doffi	ng		Ring bobbins	Doffi	ng tro	lleys			
10	Ring fra	me to wi	inding		Ring bobbins	Spec	cially o	designed	plastic	trolle	әу
11	Winding	j to pack	ing		Cones	Big	size	plastic	trolley	or	special
						desig	gned t	rolley			
						1					

1.From truck to mill stores

In the most of the textile spinning mills, raw material i. e. cotton or polyester or viscose in the forms of bale and other supplies are carried to mills by means of motor trucks. After arrival of trucks, cotton or manmade fibers bales are manually pushed down on the floor. These bales are transported with the help of 2, 3 or 4-wheeled industrial trucks/trolleys (Figure 1&2) for storing in go down one by one. This consumes time, requires more workers. Sometimes Forklifts (Figures 3) can be used to unload bales (2 or 3 at a time) directly from trucks, transport and stack them in go downs.





Figure 1: 2-wheeled industrial trucks/trolleys trucks/trolleys

Figure 2: 4-wheeled industrial







Figure 3: Forklifts

Figure 4: Platform trucks

i.From raw material store to mixing department

From go downs, bales are manually transported to the mixing department using single bale trolley. 2, 3 or 4-wheeled industrial trucks/trolleys manual or powered are utilized for handling the bales of raw material such as bales of cotton/polyester/viscose etc. Sometimes, mills can use platform trucks (Figure 4) by which a single operator can transport up to 3 bales at a time and deliver them at the appropriate place in the mixing department. If mixing department is situated at an elevated place, forklifts can be used.

ii.From mixing to blow-room

The raw material (such as cotton) from the mixing to the bale breaker is transported by means of a mixing trolley. Earlier this was done manually by hands or by using bamboo baskets which not only took more time but also caused cotton being dropped on floor leading to more waste and poor housekeeping. In the, middle age, to reduce these disadvantages, special designed manual or mechanical iron trolleys (Figure 5) are used for transporting the material from mixing stock to bale breaker. To supply bales near bale plucker mills can use platform trucks (Figure 4). Recently, lift-able spring type





pedal operated mixing trolley (Figure 6) is used to improve the material handling. This type of trolley can transport up to 30 kg of material at a time.



Figure 5: Iron trolley



iii.Within blow room line

Within the opening and cleaning machine the material is transported with the help of conveyor belts (Figure 7). From initial opening machines, the cotton is shifted from one opening machine to other by pneumatic pipes (blown air pipes conveyor) with the help of exhaust fans and cages (Figure 8).



Figure 8: Air pipe conveyor

1v.From blow room to carding departments

In conventional mills, blow room laps are transported manually by the workers keeping one lap at a time on the shoulder. Many mills are using special designed mechanical trolley to transport blow room laps to carding section (Figure 9). It can handle 4 to 6 laps at a time. There is little possibility of any damage occurring to the laps since they are already stacked vertically in blow room. Recently, with the advent of chute feed cards the blow room material shifted by blown air pipe conveyors and chute (Figure 10). In

chute feed card, the chute feed the material to the liker-in of the carding machine through feed roll and feed plate as in the case of lap feed.

Figure 9: Trolley for blow room laps Figure 10: Chute feeding system

V.From carding machine to draw frame and draw frame to speed frame

The material delivered in the form of sliver at the carding machine, comber and draw frame is collected in cans. According to machine make up and design, they may have various sizes such as can's diameter is 14", 16", 42" or 48" etc. with and without wheels (Figure 11).

These cans (both full and empty) are to be transported between cards, draw frames, comber preparatory machines, combers and fly frames. In many mills, cans are transported manually by dragging them on the floor. This practice would not only spoil the floor, damage the can and result in wastage of sliver but also consume more time.

The trolley shown in Figure 12 can be used to carry 3 or 4 cans at a time. For easy transportation, latest cans are of big size and having wheels (caster) at bottom.

Figure 11: Sliver cans

Figure 12: Cans carrying trolley

i. Sliver lap/ribbon lap machine to comber

The sliver/ribbon laps are generally transported to the combers manually, i. e. by carrying one or two laps on hands at a time which takes a lot of time and also results in wastage of material. A special designed trolley (Figure 13) is mostly used to transport eight laps at a time. Since the design is simple and compact, it can be moved easy along narrow alley.

Figure 13: Sliver/ribbon laps carrying trolley

ii. From speed frame to ring frame

In the conventional practice, speed frame doffers normally keep the doffed bobbins on the arms and then carry 6 to 8 bobbins by hand to the storage place. This practice is not only laborious but also sometimes results in bobbins falling on the floor and the roving material getting spoiled. It is also cause injuries to the workers. Mostly, big size plastic container trolley is used for handling the material from speed frame to ring frame (Figure 14). It can handle one full doff of a speed frame bobbins. Here, bobbins are haphazardly/randomly stacked. This often causes damages especially at the bottom

row. The most appropriate trolley for carrying full bobbins to ring frames without causing any damage to the roving, is specially designed porcupine type trolley (Figure 15). In this type of trolley, each bobbin is placed separately on a peg.

Figure 14: Big size trolley for speed frame Figure 15: Porcupine type trolley for speed frame

iii. Trolley for speed frame flyers

At the time of speed frame maintenance or cleaning, the flyers are removed from the machine. This trolley (Figure 16) is used to carry all the flyers from the speed frame to maintenance store and maintenance store to speed frame.

Figure 16: Trolley for speed frame flyers

iv. From ring frame to winding/doubling/reeling.

In some mills, doffed cops are first transferred to bamboo baskets or big size metal containers and they are transported to post spinning department in trolleys. This practice not only results in damages to some cops (top layer of yarns) but also causes entanglement leading to yarn waste. In winding department, the person has to transfer the cops from these containers/baskets either to bins or to other small containers. This would also result in entanglement of yarn leading to more waste. Instead of transferring the doffed cops to the baskets, the plastic crates, which are used for doffing, with cops themselves can be loaded on the trolley and transported to the post spinning section.

v. Post spinning

In many mills, full cones are transported to the packing section by using basket or steel trolley. This practice would cause damages to the cones. To avoid this, mills must use

trolleys fitted with cone holder pegs (Figure 19). When the cones are kept in this trolley, it is easy to inspect them for package defects. This trolley can also be used to transport cheeses from doubler winding machines to TFO twisting/ring doubling.

vi. Packing section

In many mills, packed cone bags or cartons are transported to finished yarns go down by carrying them manually. This reduces the capacity of material handling and some time it cause of material damage. To avoid this, a platform truck can be used.

vii. Stores section

In modern mills where material and spares are stored in racks, electric order picker can be used to pick the required items.

A. Load shifting equipment in weaving units

S.	Process	Material	Material handling Equipment
No.			
1.	Winding cones to	Cones	Container plastic trolley or trolleys
	warping		fitted with cone holder pegs
2.	Warping beams to	Warping beam	Warp Beam Carrier
	sizing		
3.	Sizing to beaming	Sized beam	Manual 2 or 4 wheeled truck, Hoist
4.	Beaming to loom	Weave's beam	Special designed trolleys
	shed		
5.	Loomshed to grey	Cloth beam	Specially designed trolley
	inpection		

i. Warping to sizing

Special designed equipment's are used to carry warp beam (Figure 20) and to carry empty beam (Figure 21&22):

The warp beam should be stacked on rails by which they will be held at a height above the floor and will be supported on barrel rather than on flanges. Beam can be stacked on vertical racks (Figure 23). This method will require less space compared to the earlier., but separate beam lifting arrangement are required for loading and unloading the beams. Either overhead mono-rail with a chain lock or beam lifting trucks can be used for this purpose.

Figure 22: Double Warp Beam Carrier

ii. Figure 23: Cloth Roll Stocker Trolley

ii. Sizing to beaming

The hoists/cranes are used to transport sized beam to beaming. They can handle heavy material through overhead space.

iii. Beaming to loom shed

Safety is considered to be the most important factor while handling these beams because of their size and weight. The weavers beam in convention mill transported by manual methods recently, a trolley which has a curved top surface (Figure 24) is used for handling weavers beam; so that a beam does not roll off while being moved from one place to another. In modern units a special trolley is used for transportation of beams.

iv. Loom shed to grey inspection

The fabric should be transferred by using cloth roll doffer carrier (Figure 25). In some mills, use box type trolley having castor wheels so that it can be taken to the grey folding department carrying at a time a number of cloth rolls depending upon the size.

Figure 25: Hydraulic Beam Pallet Trolley

Figure 26: Cloth Roll Doffer Carrier

1.1.1 Front end loader/back hoe

Front-end loader definition is - a usually wheeled vehicle with a hydraulically operated scoop in front for excavating and loading loose material.

A tractor loader with a digging bucket mounted and operated at the front end of the tractor.

Bach hoe is a mechanical excavator which draws towards itself a bucket attached to a hinged boom.

Or a large machine for digging and moving earth that consists of a large bucket on the end of an arm attached to a vehicle.

1.1.2 Ride on forklift and pallet trucks

Forklift is a vehicle with a pronged device in front for lifting and carrying heavy loads. Pallet trucks are manually operated or powered industrial lift truck or forklift used for moving one or more pallets at a time.

1.1.3 Fixed and attachable job arms

1.1.4 Store traveling cranes and chain blocks

After use all load shifting equipment and tools must be stored in appropriate place.

1.2 Lifting load

The equipment carries the load permitted for it. If the load is above the capacity of the equipment, the equipment may damage or it may result risk.

Factors to be considered when lifting load:

- □ Ensuring the balance/stability of load/materials to be lifted.
- □ Ensuring safety of materials/ load to be lifted.
- □ Ensuring avoidance of hazards on site
- □ Protect the effect of the load on the equipment and.

1.3 Ensuring placing loads

When place a load on the equipment, the operator need to observe the load need to be lifted whether it is properly placed on lifting equipment and ready to lift.

1.4 Selecting and using safe and efficient movement path

As per working manual the operator need to select best movement path for load shifting equipment's in order to reduce risks on equipment's, load/materials and person also.

1.5 Checking and monitoring obstacles and hazards

1.6 Applying environmental requirements and procedures

Self-Check of Learning Guide #2(A)	Short Answer
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Instructions: Give short answer for the following questions

A. Write factors to be considered when lifting load

Note:	Satisfactory Rating: 51%	Unsatisfactory	Below: 51%
		Rating:	

You can ask your teacher for the copy of the correct answer.

BASIC TEXTILE OPERATION NTQF Level I LEARNING GUIDE #23

Unit of Competence:	Operate Load Shifting
	Equipment
Module Title: -	Operating Load Shifting
	Equipment
LG Code:	IND BTO1 M07 LO3-LG23
TTLM Code:	IND BTO1TTLM 0919 v1

LO3.Complete documentation

Instruction Sheet

Complete documentationLO3

This learning guide is developed to provide you the necessary information regarding the following learning outcome content coverage and topics –

2. Complete documentation

2.1 Relaying correct operations information

2.2 Interpreting and recording document

This guide will also assist you to attain the learning outcome stated in the cover page. Specifically, upon completion of this Learning Guide, you will be able to –

- Relay information regarding operations in work area correctly from other operators, shift and supervisory personnel, as required
- Interpret documentation records of receipts, dispatch correctly and complete movement correctly according to statutory requirements and enterprise standard procedures.

Learning Instructions:

- 1 Read the specific objectives of this Learning Guide.
- 2. Follow the instructions described in number 3 to 10.
- 3.Read the information written in the "Information Sheets 3". Try to understand what are

being discussed. Ask you teacher for assistance if you have hard time

understanding

them.

- 4.Accomplish the "Self-check 3"
- 5.Ask from your teacher the key to correction (key answers) or you can request your teacher to correct your work. (You are to get the key answer only after you finished answering the Self-check 3).

6.If your rating is unsatisfactory, see your teacher for further instructions or go back to

Learning Activity #3.

7.Submit your accomplished Self-check. This will form part of your training portfolio. 8.Read the information written in the "Information Sheet 3". Try to understand what are

being discussed. Ask you teacher for assistance if you have hard time understanding

them.

9.Accomplish the "Self-check 3"

10.Ask from your teacher the key to correction (key answers) or you can request your teacher to correct your work. (You are to get the key answer only after you finished answering the Self-check 3).

3.1communicate information with operator's and supervisor's

• A Quality Supervisor in a spinning mill is in charge of the other workers, including the Blenders, Carders and Spinners.

The Supervisor continuously checks the quality of the fibers and yarn.

• The Lab Technician helps the Quality Supervisor by conducting tests on samples, but it is the Supervisor who is ultimately responsible.

3.2 Documentation

- A driver's trip sheet
- Invoices or delivery notes for the different loads that have to be delivered at the various customers
- Credit notes for goods that were returned
- If your customer pays cash upon delivery your driver will have to issue a receipt to the customer after checking the accuracy of the invoice.
- If your customer pays by account they have to acknowledge that they have received the goods. This is why the receiving clerk at the customer's premises has to sign the invoice or delivery note and also note the date that the goods were received.
- If an invoice does not correspond with the goods delivered in quantity, description or price, you have to advise stores and administration. Stores have to check their stock levels and administration have to amend the invoice so that the customer only pays for goods that were received.

- Paperwork should be completed the same day and handed to the different departments – invoices to admin, etc.. This is important, since the rest of the organisation needs the information in the reports, invoices and other documentation in order to do their work properly.
- The supervisor has to report regularly about the use of vehicles, the cost of vehicles, the number of deliveries, the mass of the deliveries, if the deliveries were made on time, etc.
- Finance has to know which goods were delivered and returned so that their statements to customers are correct.
- Incidents and accidents have to be reported immediately so that further steps such as damage control can take place.

Records and Documentation of Receipts, Dispatch and Reporting

Receipt is the process of checking and accepting, from all sources (vendors, production units, repair units etc.), all materials and parts which are used in the organization. These include supplies for manufacturing or operating processes, plant maintenance, offices and capital installations.

Dispatch

A customer places an order with the Sales department who will issue an invoice for the sales transaction. This invoice will either be sent to dispatch or directly to stores. If the invoice is sent to dispatch, dispatch will complete a requisition which is sent to stores. As soon as stores receive the requisition, the stock for the delivery is issued and sent to dispatch together with a copy of the requisition.

If the invoice is sent to stores directly, stores will complete a stock issue note based on the invoice and send the goods with the stock issue note and the invoice to dispatch.

Self-Check 3	Written Test
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Directions: Answer all the questions listed below. Key answer you're seen before of the references book

- 1. What is Receipt?(5points)
- 2. What is the function of supervisor?(points)
- **3.** List at list four documentation procedures?(5points)

LAP Test 3	Practical Demonstration

Name:	Date:
Time started:	Time finished:

Instructions: Given necessary templates, workshop, tools and materials you are required to perform the following tasks within 3 hours.

Task 1: Observe the loading process

Task 2: Recorded.

Task 3: Report

II REFERENCE BOOK

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