



Model Curriculum

QP Name: Material Handling Equipment (MHE) Operator and Technician

QP Code: LSC/Q0401

QP Version: 2.0

NSQF Level: 4

Model Curriculum Version: 2.0

Table of Contents

Training Parameters	2
Program Overview	3
Training Outcomes.....	3
Compulsory Modules	3
Electives.....	4
Optional Modules.....	6
Module 1: Introduction to (MHE) Operator and Technician	7
Module 2: Material handling using MHE.....	8
Module 3: Preventive and first line maintenance of MHE.....	9
Module 4: Compliance to health, safety and security norms.....	10
Module 5: Guidelines on integrity and ethics.....	11
Module 6: Employability skills.....	12
Module 7: Battery operated pallet truck.....	14
Module 8: Reach truck	15
Module 9:Forklift.....	16
Module 10:Order Picker	17
Module 11:Supervise receiving & dispatch	18
Annexure	19
Trainer Requirements	19
Assessor Requirements	20
Assessment Strategy	21
References.....	23
Glossary.....	23
Acronyms and Abbreviations	24

Training Parameters

Sector	Logistics
Sub-Sector	WAREHOUSING (STORAGE AND PACKAGING)
Occupation	ENGINEERING/ MAINTENANCE
Country	India
NSQF Level	4
Aligned to NCO/ISCO/ISIC Code	NCO-2015/ 8334 and ISCO-08/8334
Minimum Educational Qualification and Experience	12th grade pass Or Completed 2nd year of 3-year diploma (after 10th) and pursuing regular diploma Or 10th grade pass and pursuing continuous schooling Or 10th grade Pass + ITI (2 years after Class 10th) Or 10th Grade Pass + 2 year relevant experience Or Previous relevant Qualification of NSQF Level 3.0 (Warehouse Associate/ Warehouse Binner/ Warehouse Picker/ Warehouse Packer) with minimum education as 8th Grade pass + 3 year relevant experience (in warehouse)
Pre-Requisite License or Training	NA
Minimum Job Entry Age	18
Last Reviewed On	28/02/2023
Next Review Date	28/02/2026
NSQC Approval Date	28/02/2023
QP Version	2.0
Model Curriculum Creation Date	07/10/2022
Model Curriculum Valid Up to Date	28/02/2026
Model Curriculum Version	2.0
Minimum Duration of the Course	450 hrs
Maximum Duration of the Course	690 hrs

Program Overview

This section summarizes the end objectives of the program along with its duration.

Training Outcomes

At the end of the program, the learner will be able to:

- Execute safe loading, unloading and movement of cargo using MHE and associate equipment
- Perform preventive and first line maintenance of MHE
- Comply to work place integrity, ethical and regulatory practices
- Manage workplace for safe and healthy work environment by following and ensuring compliance to regulatory and safety norms

Electives:

- Operate various MHE such as Battery-Operated Pallet Truck, Forklift, Reach Truck, Order Picker to load/unload and move goods

Options:

- Manage safe loading, unloading, receiving and despatch activities

Compulsory Modules

The table lists the modules, their duration and mode of delivery.

NOS and Module Details	Theory Duration	Practical Duration	On-the-Job Training Duration (Mandatory)	On-the-Job Training Duration (Recommended)	Total Duration
Bridge Module	20	10			30
Module 1: Introduction to Material Handling Equipment operations	20	10			30
LSC/N0401 – Perform material handling activities NOS Version 1.0 NSQF Level 4	20	60	10		90
Module 2: Material handling using MHE	20	60	10		90
LSC/N0402 – Perform preventive and first line maintenance check NOS Version 1.0 NSQF Level 4	20	60	10		90
Module 3: Route planning and vendor coordination	20	60	10		90

LSC/N9904 – Maintain integrity and ethics in operations NOS Version 1.0 NSQF Level 4	20	35	5		60
Module 4: Guidelines on integrity and ethics	20	35	5		60
LSC/N9905 - Maintain health, safety and security procedures NOS Version 1.0 NSQF Level 4	20	35	5		60
Module 5: Follow health safety and security procedures	20	35	5		60
Employability Skills DGT/VSQ/N0102, NOS Version 1.0 NSQF Level 4	30	30			60
Total Duration	130	230	30		390

ELECTIVES (Mandatory to select at least one)

The table lists the Electives, their duration and mode of delivery.

ELECTIVE 1: Battery operated pallet truck

NOS and Module Details	Theory Duration	Practical Duration	On-the-Job Training Duration (Mandatory)	On-the-Job Training Duration (Recommended)	Total Duration
LSC/N0403 - Operate Battery Operated Pallet truck NOS Version 1.0 NSQF Level 4	30	30			60
Module 6: Operating battery operated pallet truck	30	30			60
Total Duration	30	30			60

ELECTIVE 2: Reach truck

NOS and Module Details	Theory Duration	Practical Duration	On-the-Job Training Duration (Mandatory)	On-the-Job Training Duration (Recommended)	Total Duration
LSC/N0404 Operate Reach truck	30	30			60
Module 7: Operating Reach truck	30	30			60
Total Duration	30	30			60

ELECTIVE 3: Forklift

NOS and Module Details	Theory Duration	Practical Duration	On-the-Job Training Duration (Mandatory)	On-the-Job Training Duration (Recommended)	Total Duration
LSC/N0405 Operate Forklift NOS Version 1.0 NSQF Level 4	30	30			60
Module 8: Operating Forklift	30	30			60
Total Duration	30	30			60

ELECTIVE 4: Order Picker

NOS and Module Details	Theory Duration	Practical Duration	On-the-Job Training Duration (Mandatory)	On-the-Job Training Duration (Recommended)	Total Duration
LSC/N0406 Operate order picker NOS Version 1.0 NSQF Level 4	30	30			60
Module 9: Operating order picker	30	30			60
Total Duration	30	30			60

Optional Modules

The table lists the option modules, their duration and mode of delivery.

Option 1: Supervise receiving & dispatch

NOS and Module Details	Theory Duration	Practical Duration	On-the-Job Training Duration (Mandatory)	On-the-Job Training Duration (Recommended)	Total Duration
LSC/N0120 Supervise receiving and dispatch activities NOS Version 1.0 NSQF Level 4	30	30			60
Module 10: Receiving and dispatch operations	30	30			60
Total Duration	30	30			60

Module Details

Module 1: Introduction to (MHE) Operator and Technician

Mapped to Bridge Module

Terminal Outcomes:

- Describe the basic structure and functions of (MHE) Operator and warehousing
- Demonstrate operating and handling MHE.

Duration: 20:00	Duration: 10:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> • Describe the components used in supply chain and logistics sector • Explain the job roles found in warehousing • Detail your job role as Material Handling Equipment (MHE) operator and technician and its interface with other job roles • Describe the various MHEs and equipment used in warehouses • Discuss the documentation requirements in warehousing operations 	<ul style="list-style-type: none"> • Classify the components of supply chain and logistics sector • Detail the various sub-sectors and the opportunities in them • Identify various activities in warehouse, port yard, land, ship and air transportation • Demonstrate as Material Handling Equipment (MHE) operator and technician and illustrate how it's involved with other job roles • Prepare the documents used in warehousing operations
Classroom Aids	
Charts, Models, Video presentation, Flip Chart, Whiteboard/Smart Board, Marker, Board eraser	
Tools, Equipment and Other Requirements	
Teaching board, computer, projector, video player or TV	

Module 2: Material handling using MHE

Mapped to LSC/N0401, v1.0

Terminal Outcomes:

- Detail the steps involved in operating MHE
- Describe reporting and maintenance activities of MHE.

Duration: 20:00	Duration: 60:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> • Explain the different components of a picklist • Detail the processes undertaken during picking, movement, stock counting, quality inspection etc. • Describe the importance of using PPE for operating various types of MHEs • Detail the tools and tackles required for securing the cargo/product • Prepare forms for goods damages, and insurance claim 	<ul style="list-style-type: none"> • Prepare a picklist and check the components • Plan sequence of operations to minimise time and distance travelled • List the inspections to be done on various types of MHE before starting operations • Inspect the condition of PPE to be used, for operating various types of MHEs • Operate MHE to move the pallet to the specified location • Operate MHE to move damaged/spilled goods to quarantine area • Report breakages, spillages, count mismatch, packaging defects etc. • Demonstrate safe parking of MHE • Report MHE maintenance activity and other maintenance requirements • Prepare forms for goods damages, and insurance claim
Classroom Aids	
Charts, Models, Video presentation, Flip Chart, Whiteboard/Smart Board, Marker, Board eraser	
Tools, Equipment and Other Requirements	
Personal Protective Equipment (PPEs), Forklift, Reach stacker, pallet truck, pallet jacks, hand trucks, side loader, order picker, walkie, stacker, etc.	

Module 3: Preventive and first line maintenance of MHE

Mapped to LSC/N0402, V1.0

Terminal Outcomes:

- Detail the steps to be followed in MHE maintenance
- Discuss the reporting process of inspection and repairs.

Duration: 20:00	Duration: 60:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> • Explain preventive, maintenance procedures to be followed. • Detail the components found in maintenance log • List the PPE required for undertaking first line maintenance of MHE • List the typical complaints in MHE operation and their corresponding inspection methods • Describe the checks to be done for inspection report. • Detail the maintenance reporting process through AMC/ OEM/ specialist if required 	<ul style="list-style-type: none"> • Prepare maintenance log of activities during shift. • Demonstrate inspection of damage in tyres, parking break, main horn, reverse horn, warning lamp, etc. • Inspect MHE for fluid levels of engine, transmission, differential, hydraulic, radiator coolant and brake oil to top up any fluids as required • Identify wear and tear and the replacement requirement of spares in MHE • Perform part replacement/ repair and test for smooth operations of MHE • Perform periodic maintenance of batteries to ensure it charges as per design • Assess the fault in MHE to identify the root cause of problem • Identify repair requirements by inspecting the components of MHE • Perform first line repair of MHE with equipment • Escalate maintenance requirement through AMC/ OEM/ specialist if required • Record the parts and spares that needs to be replaced. • Record repairs undertaken in MHE and update in health card • Report reason for the problem, solution, expected lifespan and suggested part replacement dates
Classroom Aids	
Charts, Models, Video presentation, Flip Chart, Whiteboard/Smart Board, Marker, Board eraser	
Tools, Equipment and Other Requirements	
truck, pallet jacks, hand trucks, order picker, tools and tackles, maintenance kit etc.	

Module 4: Guidelines on integrity and ethics

Mapped to LSC/N9904, v1.0

Terminal Outcomes:

- Explain the concepts of integrity and ethics
- Detail the various regulatory requirements related to logistics industry

Duration: 20:00	Duration: 35:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> • Describe the concepts of integrity, ethics • Detail the various regulatory requirements related to logistics industry • Explain data and information security practices • Detail the procedure for documenting all integrity and ethics violations • Explain escalation matrix for reporting deviation 	<ul style="list-style-type: none"> • Practice the principles of integrity and ethics • Follow the various regulatory requirements related to logistics industry • Perform data and information security practices • Discuss on methods to identify and avoid corrupt practices • Discuss regulatory requirements, code of conduct and etiquettes • Comply to regulatory requirements of the company • Practice code of conduct and etiquettes on all aspects • Document all integrity and ethics violations • Report deviation as per the escalation matrix
Classroom Aids	
Charts, Models, Video presentation, Flip Chart, Whiteboard/Smart Board, Marker, Board eraser	
Tools, Equipment and Other Requirements	
SOP, Teaching board, computer, projector, video player, stationery, worksheets and TV	

Module 5: Compliance to health safety and security norms

Mapped to LSC/N9905, v1.0

Terminal Outcomes:

- Describe health, safety, and security procedures in warehouse
- Demonstrate the inspection procedure to ensure appropriate and safe conditions of activity area and equipment
- Illustrate the standard protocol to be followed during emergency situations, accidents and breach of safety

Duration: 20:00	Duration: 35:00
<p>Theory – Key Learning Outcomes</p> <ul style="list-style-type: none"> • Detail health, safety and security procedures in warehouse • Describe the 5S to be followed at workplace • Explain the inspection procedure to ensure appropriate and safe conditions of activity area and equipment • Discuss unsafe working conditions in operations • Describe the inspection procedure to check safe handling of hazardous goods • Discuss the standard protocol to be followed during emergency situations, accidents and breach of safety • Document health, safety and security violations • Explain the escalation matrix for reporting deviation 	<p>Practical – Key Learning Outcomes</p> <ul style="list-style-type: none"> • Follow health, safety and security procedures in warehouse • Practice 5S at the allocated workplace • Inspect the activity area and equipment, for appropriate and safe conditions • Identify unsafe working conditions • Inspect adherence to standard operating procedures (SOP) while handling dangerous and hazardous goods • Implement standard protocol in case of emergency situations, accidents, and breach of safety • Prepare report on health, safety and security violations • Report deviation as per the escalation matrix
<p>Classroom Aids</p> <p>Charts, Models, Video presentation, Flip Chart, Whiteboard/Smart Board, Marker, Board eraser</p>	
<p>Tools, Equipment and Other Requirements</p> <p>PPEs, MHEs like Forklift, reach stacker, pallet truck, barcode scanner, packaging devices, packing material, markers and stationery, etc, LLMS (learning version)</p>	

Module 6: Employability Skills

Mapped to DGT/VSQ/N0102, v1.0

Terminal Outcomes:

- Discuss the Employability Skills required for jobs in various industries
- Explain the constitutional values, including civic rights and duties, citizenship, responsibility towards society and personal values and ethics such as honesty, integrity, caring and respecting others that are required to become a responsible citizen
- Discuss how to identify opportunities for potential business, sources of funding and associated financial and legal risks with its mitigation plan

Duration: 30:00	Duration: 30:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> • Discuss the Employability Skills required for jobs in various industries • List different learning and employability related GOI and private portals and their usage • Explain the constitutional values, including civic rights and duties, citizenship, responsibility towards society and personal values and ethics such as honesty, integrity, caring and respecting others that are required to become a responsible citizen • Discuss importance of relevant 21st century skills. • Describe the benefits of continuous learning. • Explain the importance of active listening for effective communication • Discuss the significance of working collaboratively with others in a team • Discuss the significance of escalating sexual harassment issues as per POSH act. • List the common components of salary and compute income, expenditure, taxes, investments etc. • Discuss the legal rights, laws, and aids • Describe the role of digital technology in today's life • Discuss the significance of displaying responsible online behaviour while browsing, using various social media platforms, e-mails, etc., safely and securely • Explain the types of entrepreneurship and enterprises • Discuss how to identify opportunities for potential business, sources of funding and 	<ul style="list-style-type: none"> • Practice different environmentally sustainable practices. • Exhibit 21st century skills like Self-Awareness, Behaviour Skills, time management, critical and adaptive thinking, problem-solving, creative thinking, social and cultural awareness, emotional awareness, learning to learn etc. in personal or professional life. • Demonstrate to use basic English sentences for everyday conversation in different contexts, in person and over the telephone • Read and interpret text written in basic English • Write a short note/paragraph / letter/e - mail using basic English • Create a career development plan with well-defined short- and long-term goals • Communicate effectively using verbal and nonverbal communication etiquette. • Demonstrate how to behave, communicate, and conduct oneself appropriately with all genders and PwD • Outline the importance of selecting the right financial institution, product, and service • Demonstrate how to carry out offline and online financial transactions, safely and securely • Operate digital devices and use the associated applications and features, safely and securely • Create sample word documents, excel sheets and presentations using basic features

<p>associated financial and legal risks with its mitigation plan</p> <ul style="list-style-type: none"> • Describe the 4Ps of Marketing-Product, Price, Place and Promotion and apply them as per requirement • Detail the significance of analyzing different types and needs of customers • Explain the significance of identifying customer needs and responding to them in a professional manner. • Discuss the significance of maintaining hygiene and dressing appropriately • Explain the significance of maintaining hygiene and confidence during an interview • List the steps for searching and registering for apprenticeship opportunities 	<ul style="list-style-type: none"> • Utilize virtual collaboration tools to work effectively • Devise a sample business plan, for the selected business opportunity • Create a professional Curriculum Vitae (CV) • Use various offline and online job search sources such as employment exchanges, recruitment agencies, and job portals respectively • Perform a mock interview
<p>Classroom Aids</p>	
<p>Charts, Models, Video presentation, Flip Chart, Whiteboard/Smart Board, Marker, Board eraser, UPS, LCD Projector, Computer Tables & chairs</p>	
<p>Tools, Equipment and Other Requirements</p>	
<p>Computer (PC) with latest configurations – and Internet connection with standard operating system and standard word processor and worksheet software (Licensed) (all software should either be latest version or one/two version below), Scanner cum Printer, LLMS (learning version)</p>	

Module 7: Battery operated pallet truck

Mapped to LSC/N0403, v1.0

Terminal Outcomes:

- Operating BOPT errorfree.
- Detail the inventory reports preparation

Duration: 30:00	Duration: 30:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> • List the prechecks to be performed in a BOPT before starting operations • Detail inventory list preparation and damaged goods segregation process. • Prepare end of operations report 	<ul style="list-style-type: none"> • Perform pre checks on battery operated pallet jacks to ensure that they are in proper working order • Operate BOPT to load/unload and move goods to the assigned location • Perform inventory count of goods • Perform damaged goods segregation • Report unusual incidents, accidents, spillages and breakages • Demonstrate safe parking of BOPT
Classroom Aids	
Charts, Models, Video presentation, Flip Chart, Whiteboard/Smart Board, Marker, Board eraser	
Tools, Equipment and Other Requirements	
BOPT, pallet jacks, Standard operating procedures (SOP), reporting forms, Personal protective equipment (PPE), bins, crates, pallets, etc.	

Module 8: Reach truck

Mapped to LSC/ N0404, v1.0

Terminal Outcomes:

- Describe inspection and maintenance of Reach Truck on daily basis
- Demonstrate how to operate Reach Truck

Duration: 30:00	Duration: 30:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> • Detail the components of a picklist • Describe the procedure for daily inspection. • Explain how to calculate safe loading limits of Reach Truck to operate within limits • Discuss the escalation process for reporting major repairs and part replacement requirements 	<ul style="list-style-type: none"> • Prepare a picklist with all required components • Inspect the Reach Truck as per daily inspection checklist • Test all hydraulic/mechanical/electrical systems and information gauges to ensure that they are functioning properly • Demonstrate safe placement of cargo on pallet • Operate Reach Truck to move pallet to the assigned location • Operate Reach Truck to retrieve goods from its location • Compute safe loading limits of Reach Truck to operate within limits • Perform minor repairs in Reach Truck • Escalate major repairs and part replacement requirements
Classroom Aids	
Charts, Models, Video presentation, Flip Chart, Whiteboard/Smart Board, Marker, Board eraser	
Tools, Equipment and Other Requirements	
Personal protective equipment (PPEs), Reach truck, pallets, SOP, sample goods, documentation, etc.	

Module 9: Forklift

Mapped to LSC/N0405, v1.0

Terminal Outcomes:

- Describe inspection and maintenance of Forklift on daily basis
- Demonstrate how to operate Forklift

Duration: 30:00	Duration: 30:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> • Describe the process to be followed and the inspections to be done before starting fork lift. • Detail the forklift position to be maintained while operating with and without loads • Discuss the process for calculating safe load as per the limits of the forklift • Explain the escalation process for reporting major repairs and part replacement requirements 	<ul style="list-style-type: none"> • Inspect the forklift for fully charged battery, exposed wires, fluid leak, battery plug connections not loose, worn or dirty; vent caps not clogged etc. • Check bolts, nuts, guards, chains, or hydraulic hose reels are not damaged, missing or loose • Inspect forks for damages/ cracks and working condition of latches and associated parts • Inspect fluid levels of engine, transmission, differential, hydraulic, radiator coolant and brake oil and top up any fluids as required • Inspect lift mechanism, tilt mechanism, foot brake, clutch, gearshift operation • Compute safe loading as per the limits of the forklift • Perform safe loading, movement and unloading of pallets, bins, and crates • Demonstrate safe parking of forklift • Perform minor repairs in forklift • Escalate major repairs and part replacement requirements
Classroom Aids	
Charts, Models, Video presentation, Flip Chart, Whiteboard/Smart Board, Marker, Board eraser	
Tools, Equipment and Other Requirements	
MS office, ERP, stationery, worksheets, computer, projector, GST guidelines etc.	

Module 10: Order Picker

Mapped to LSC/N0406, v1.0

Terminal Outcomes:

- Demonstrate the duties of Order Picker
- Describe the Reporting Processes.

Duration: 30:00	Duration: 30:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> • List the items to be checked from pick list. • Detail the PPE requirement for operation of Order Picker • Discuss the retrieving goods process of Order Picker as per the picklist • Explain the inspection procedure to be followed. • Prepare damaged goods and packaging report. • Prepare reports for accidents, damages, spillages etc. 	<ul style="list-style-type: none"> • Check labels with picklist items for any errors/changes • Inspect the order picker for suitability for work in terms of greasing, availability of fuel, tyre pressure, etc. • Assess correct usage of PPE by the picker • Operate Order Picker to retrieve the goods as per the picklist • Inspect picked items for appropriate labelling and packaging as per delivery requirements • Report damaged goods and packaging • Report accidents, damages, spillages etc.
Classroom Aids	
Charts, Models, Video presentation, Flip Chart, Whiteboard/Smart Board, Marker, Board eraser	
Tools, Equipment and Other Requirements	
Order picker, Personal protective equipment (PPE), Standard operating procedures (SOP), reporting formats, bins, crates, pallets, bar code scanner etc.	

Module 11: Supervise receiving & dispatch

Mapped to LSC/N0120, v1.0

Terminal Outcomes:

- Detail the various inspection and recording processes.
- Describe damaged goods handling.

Duration: 30:00	Duration: 30:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> • Prepare a plan of staging area for loading/unloading of goods • Describe the recording process for spillage/breakage during loading/unloading • Detail the mandatory documentation to be checked before and after loading/unloading • Describe quarantine and safe disposal procedure for damaged goods • Explain the documentation procedure for goods damaged during transit, loading/unloading and handling • Describe stowage plan and stacking procedure • List appropriate storage methods for different types of products • Describe inventory counting process 	<ul style="list-style-type: none"> • Record spillage/breakage during loading/unloading • Perform visual inspection of goods • Check the mandatory documents before and after loading/ unloading goods. • Demonstrate quarantine and safe disposal for damaged goods • Prepare documentation for goods damaged during transit, loading/unloading and handling • Inspect despatch process for compliance to SOP • Perform inventory counting as per process • Illustrate inventory reconciliation procedure • Prepare daily/weekly/monthly/periodic reports on receipt and dispatch performance, pending activities, worker productivity, inventory status etc.
Classroom Aids	
Charts, Models, Video presentation, Flip Chart, Whiteboard/Smart Board, Marker, Board eraser	
Tools, Equipment and Other Requirements	
SOP, worksheets, stationery, markers, PPEs, ERP, computer, printers, safety equipment etc.	

Annexure

Trainer Requirements

Trainer Prerequisites						
Minimum Educational Qualification	Specialization	Relevant Industry Experience		Training Experience		Remarks
		Years	Specialization	Years	Specialization	
Graduate		2	Engineering/ maintenance	1	Engineering/ maintenance	

Trainer Certification	
Domain Certification	Platform Certification
Certified for Job Role: “Material Handling Equipment (MHE) Operator and Technician” mapped to QP: “LSC/Q0401, v2.0”. Minimum accepted score is 80%	Recommended that the Trainer is certified for the Job Role: “Trainer (VET and Skills)”, mapped to the Qualification Pack: “MEP/Q2601, V2.0” with minimum score of 80%

Assessor Requirements

Assessor Prerequisites						
Minimum Educational Qualification	Specialization	Relevant Industry Experience		Training/Assessment Experience		Remarks
		Years	Specialization	Years	Specialization	
Graduate		2	Engineering/maintenance	1	Engineering/maintenance	

Assessor Certification	
Domain Certification	Platform Certification
Certified for Job Role: “Material Handling Equipment (MHE) Operator and Technician” mapped to QP: “LSC/Q0401, v2.0”. Minimum accepted score is 80%	Recommended that the Assessor is certified for the Job Role: “Assessor (VET and Skills)”, mapped to the Qualification Pack: “MEP/Q2701, V2.0” with minimum score of 80%

Assessment Strategy

The emphasis is on 'learning-by-doing' and practical demonstration of skills and knowledge based on the performance criteria. Accordingly, assessment criteria for each job role are set and made available in qualification pack.

The assessment papers for both theory and practical would be developed by Subject Matter Experts (SME) hired by Logistics Sector Skill Council or with the LSC accredited Assessment Agency as per the assessment criteria mentioned in the Qualification Pack. The assessments papers would also be checked for the various outcome-based parameters such as quality, time taken, precision, tools & equipment requirement etc.

Each NOS in the Qualification Pack (QP) is assigned a relative weightage for assessment based on the criticality of the NOS. Therein each Element/Performance Criteria in the NOS is assigned marks on relative importance, criticality of function and training infrastructure.

The following tools would be used for final assessment:

1. Practical Assessment: This comprises of a creation of mock environment in the skill lab which is equipped with all equipment required for the qualification pack.

Candidate's soft skills, communication, aptitude, safety consciousness, quality consciousness etc. is ascertained by observation and marked in observation checklist. The outcome is measured against the specified dimensions and standards to gauge the level of their skill achievements.

2. Viva/Structured Interview: This tool is used to assess the conceptual understanding and the behavioral aspects with regard to the job role and the specific task at hand. It also includes questions on safety, quality, environment, and equipment etc.

3. On-Job Training: OJT would be evaluated based on standard logbook capturing departments worked on, key observations of learner, feedback and remarks of supervisor or mentor.

4. Written Test: Question paper consisting of 100 MCQs (Hard:40, Medium:30 and Easy: 30) with questions from each element of each NOS. The written assessment paper is comprised of following types of questions:

- i. True / False Statements
- ii. Multiple Choice Questions
- iii. Matching Type Questions
- iv. Fill in the blanks
- v. Scenario based Questions
- vi. Identification Questions

QA Regarding Assessors:

Assessors are selected as per the “eligibility criteria” laid down by LSC for assessing each job role. The assessors selected by Assessment Agencies are scrutinized and made to undergo training and introduction to LSC Assessment Framework, competency-based assessments, assessors guide etc. LSC conducts “Training of Assessors” program from time to time for each job role and sensitize assessors regarding assessment process and strategy which is outlined on following mandatory parameters:

- 1) Guidance regarding NSQF
- 2) Qualification Pack Structure
- 3) Guidance for the assessor to conduct theory, practical and viva assessments
- 4) Guidance for trainees to be given by assessor before the start of the assessments.
- 5) Guidance on assessments process, practical brief with steps of operations
practical observation checklist and mark sheet
- 6) Viva guidance for uniformity and consistency across the batch.
- 7) Mock assessments
- 8) Sample question paper and practical demonstration

References

Glossary

Term	Description
Key Learning Outcome	Key learning outcome is the statement of what a learner needs to know, understand and be able to do in order to achieve the terminal outcomes. A set of key learning outcomes will make up the training outcomes. Training outcome is specified in terms of knowledge, understanding (theory) and skills (practical application).
OJT (M)	On-the-job training (Mandatory); trainees are mandated to complete specified hours of training on site
OJT (R)	On-the-job training (Recommended); trainees are recommended the specified hours of training on site
Training Outcome	Training outcome is a statement of what a learner will know, understand and be able to do upon the completion of the training.
Terminal Outcome	Terminal outcome is a statement of what a learner will know, understand and be able to do upon the completion of a module. A set of terminal outcomes help to achieve the training outcome.

Acronyms and Abbreviations

Term	Description
QP	Qualification Pack
NSQF	National Skills Qualification Framework
NSQC	National Skills Qualification Committee
NOS	National Occupational Standards