****

|  |
| --- |
| **Model Curriculum**  **QP Name: Liquid Transport Operator (Electives – Gaseous Product Transport / Chemical and POL Transport/ Edible Oil Transport) (Options – Transport Coordination)**  **QP Code: LSC/Q4301**  **QP Version: 2.0**  **NSQF Level: 4**  **Model Curriculum Version: 2.0** |
| **­**  Logistics Sector Skill Council|| Logistics Sector Skill Council, Ground Floor, Temple Tower, No.476, Anna Salai, Nandanam, Chennai, Tamil Nadu 600035 |

Table of Contents

[Training Parameters 2](#_Toc120185591)

[Program Overview 3](#_Toc120185592)

[Training Outcomes 3](#_Toc120185593)

[Elective Modules 5](#_Toc120185594)

[Option Modules 6](#_Toc120185595)

[Module 1: Introduction to Liquid Transport Operator 7](#_Toc120185596)

Module 2: Liquid transport vehicle operation and it's maintenance………...………….…..…………….8

[Module 3: Loading/Unloading of Cargo in Liquid Transport Vehicle……………..……...……………….9](#_Toc120185597)

Module 4: Guidelines on integrity and ethics………………………………………………..…………..………..10

Module 5: Compliance to health, safety ad security norms…………………...……….…………………….11

[Module 6: Employability Skills 12](#_Toc120185598)

[Module 7: Transportation of Gaseous Products 14](#_Toc120185599)

[Module 8: Transportation of Chemical and POL Products 15](#_Toc120185600)

[Module 9: Transportation of Edible Oil Products 16](#_Toc120185601)

[Module 10: Transport Coordination and Consignment Tracking Activities 17](#_Toc120185602)

[Annexure 18](#_Toc120185603)

[Trainer Requirements 18](#_Toc120185604)

[Assessor Requirements 19](#_Toc120185605)

[Assessment Strategy 20](#_Toc120185606)

[References 22](#_Toc120185607)

[Glossary 22](#_Toc120185608)

[Acronyms and Abbreviations 23](#_Toc120185609)

# Training Parameters

|  |  |
| --- | --- |
| **Sector** | Logistics |
| **Sub-Sector** | Liquid Logistics |
| **Occupation** | Liquid Transport Operations |
| **Country** | India |
| **NSQF Level** | 4 |
| **Aligned to NCO/ISCO/ISIC Code** | NCO – 2015 – 8332.01 – ISCO-08-9333, 8332 |
| **Minimum Educational Qualiﬁcation and Experience** | 11th grade pass  or Completed 1st year of 3-year diploma (after 10th) and pursuing regular diploma  or 10th grade pass plus 1-year NTC/ NAC  or 8th grade pass plus 2-year NTC + 1 Year NAC  or 8th pass plus 1-year NTC + 1-Year NAC plus CITS or 10th grade pass and pursuing continuous schooling  or 10th Grade Pass + 2 year relevant experience |
| **Pre-Requisite License or Training** | Commercial driving license for HMV required |
| **Minimum Job Entry Age** | 18 |
| **Last Reviewed On** | NA |
| **Next Review Date** | NA |
| **NSQC Approval Date** | NA |
| **QP Version** | 2.0 |
| **Model Curriculum Creation Date** | 02-08-2022 |
| **Model Curriculum Valid Up to Date** | 02-08-2025 |
| **Model Curriculum Version** | 2.0 |
| **Minimum Duration of the Course** | 450 hrs |
| **Maximum Duration of the Course** | 630 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:

* Inspect cargo and vessel documentation for compliance to data completeness and regulatory
* Operate liquid transport vehicle and maintain documentation as per regulation.
* Perform basic maintenance of transport vehicle.
* Inspect loading/unloading of liquid bulk cargo by operating the pumps and pipes and document the process.
* Apply the necessary precautions while handling dangerous and hazardous goods.
* 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
* Load/unload and transport gaseous products, chemical and POL products and edible oil products as per regulation
* Administer the necessary safety and security precautions while transporting liquid cargo and cater to various emergency situations
* Plan route and consolidate cargo based on truck and load availability for optimising cost
* Monitor safe, secure and timely loading/unloading, transportation and delivery of goods
* Manage relationship with customers, trucking companies, local authorities and others to ensure smooth operations

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 Liquid Transport Operator | 20 | 10 |  |  | 30 |
| **LSC/N4301 – Operate and maintain liquid transport vehicle**  V1.0  4 | **20** | **60** | **10** |  | **90** |
| Module 2: Liquid transport vehicle operations and it’s maintenance | 20 | 60 | 10 |  | 90 |
| LSC/N4302 – Assist in loading/unloading of cargo  V1.0  4 | **20** | **60** | **10** |  | **90** |
| Module 3: Loading/unloading of cargo in liquid transport vehicle | 20 | 60 | 10 |  | 90 |
| LSC/N9904 – Follow ethics and integrity in operations  V1.0  4 | **20** | **35** | **5** |  | **60** |
| Module 4: Guidelines on integrity and ethics | 20 | 35 | 5 |  | 60 |
| LSC/N9905– Follow health, safety and security procedures  V1.0  4 | **20** | **35** | **5** |  | **60** |
| Module 5: Compliance to health, safety and security norms | 20 | 35 | 5 |  | 60 |
| DGT/VSQ/N0102-Employability  V1.0 | **30** | **30** |  |  | **60** |
| Total Duration | **130** | **230** | **30** |  | **390** |

## Elective Modules

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

**Elective 1: Gaseous Product Transport**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| NOS and Module Details | Theory  Duration | Practical  Duration | On-the-Job Training Duration (Mandatory) | On-the-Job Training Duration (Recommended) | Total Duration |
| **LSC/N4304 – Transportation of gaseous products**  **V1.0**  **4** | **30** | **30** |  |  | **60** |
| Module 8: Transportation of gaseous products | 30 | 30 |  |  | 60 |
| Total Duration | **30** | **30** |  |  | **60** |

**Elective 2: Chemical and POL Transport**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| NOS and Module Details | Theory  Duration | Practical  Duration | On-the-Job Training Duration (Mandatory) | On-the-Job Training Duration (Recommended) | Total Duration |
| **LSC/N4305 – Transportation of chemical and POL products**  **V1.0**  **4** | **30** | **30** |  |  | **60** |
| Module 8: Transportation of chemical and POL products | 30 | 30 |  |  | 60 |
| Total Duration | **30** | **30** |  |  | **60** |

**Elective 3: Edible Oil Transport**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| NOS and Module Details | Theory  Duration | Practical  Duration | On-the-Job Training Duration (Mandatory) | On-the-Job Training Duration (Recommended) | Total Duration |
| **LSC/N4306 – Transportation of edible oil products**  **V1.0**  **4** | **30** | **30** |  |  | **60** |
| Module 8: Transportation of edible oil products | 30 | 30 |  |  | 60 |
| Total Duration | **30** | **30** |  |  | **60** |

## Option Modules

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

**Option 1: Transport Coordination**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| NOS and Module Details | Theory  Duration | Practical  Duration | On-the-Job Training Duration (Mandatory) | On-the-Job Training Duration (Recommended) | Total Duration |
| **LSC/N4309 – Optimal utilization and efficient tracking for liquid transport**  **V1.0**  **4** | **30** | **30** |  |  | **60** |
| Module 8: Transport consolidation and consignment tracking for liquid transport | 30 | 30 |  |  | 60 |
| Total Duration | **30** | **30** |  |  | **60** |

**Module Details**

## Module 1: Introduction to Liquid Transport Operator

***Mapped to Bridge Module***

**Terminal Outcomes:**

* Describe the basic structure and function of supply chain
* Detail the various functions of a liquid transport operator

|  |  |
| --- | --- |
| Duration: *20:00* | Duration: *10:00* |
| **Theory – Key Learning Outcomes** | **Practical – Key Learning Outcomes** |
| * Classify the components of supply chain and logistics sector * Detail the various sub-sectors and the opportunities in them * Detail activities in Liquid Logistics * Explain job roles in Liquid Logistics * Detail your job role as Liquid transport operator and its interface with other job roles | * Identify various activities in liquid logistics * Identify job roles in Liquid Logistics * Identify the various MHEs and equipment used in Liquid Logistics |
| **Classroom Aids** | |
| Charts, Models, Video presentation, Flip Chart, Whiteboard/Smart Board, Marker, Board eraser | |
| **Tools, Equipment and Other Requirements** | |
|  | |

Module 2: Liquid Transport Vehicle Operations and It’s Maintenance

***Mapped to LSC/N4301, v1.0***

**Terminal Outcomes:**

* Detail the steps involved in liquid transport vehicle operations and maintenance

|  |  |
| --- | --- |
| Duration: *20:00* | Duration: *60:00* |
| **Theory – Key Learning Outcomes** | **Practical – Key Learning Outcomes** |
| * Describe the documentation requirement for liquid transport and operating liquid transport vehicle * Detail the process of inspecting documentation for validity, completeness and compliance to regulations * List the steps to be followed for operation of vehicle * Detail the steps in the operation of operation of various gauges in vehicle to monitor liquid cargo parameters * Detail the vehicle tank cleaning procedures for different types of liquids * Explain vehicle inspection procedure * Document repair, damages and fitness | * Prepare the documents for liquid transport and for operating liquid transport vehicle * Inspect the documentation for validity, completeness and compliance to regulations * Demonstrate operation of vehicle * Demonstrate operations of various gauges in vehicle to monitor liquid cargo parameters * Demonstrate the vehicle tank cleaning procedures for different types of liquids * Perform inspection of vehicle as per SOP * Record repair, damages and fitness |
| **Classroom Aids** | |
| Charts, Models, Video presentation, Flip Chart, Whiteboard/Smart Board, Marker, Board eraser | |
| **Tools, Equipment and Other Requirements** | |
| Liquid transport vehicle, tools and tackles for maintenance, standard documentation templates, SOP, worksheets, computer, projector, stationery, etc. | |

## Module 3: Loading/Unloading of Cargo in Liquid Transport Vehicle

***Mapped to LSC/N4302, V1.0***

**Terminal Outcomes:**

* Detail the steps to be followed for effective loading/unloading of cargo in liquid transport vehicle

|  |  |
| --- | --- |
| Duration: *20:00* | Duration: *60:00* |
| **Theory – Key Learning Outcomes** | **Practical – Key Learning Outcomes** |
| * Describe the process of using weighbridge to weigh the vessel * Detail the PPE to be used, safety and security precautions to be undertaken for different types of liquids * Explain the usage of different types of pipe, valve and measuring gauge setup for cargo transfer * Detail the liquid loading/unloading and measuring process * Document volume of goods transferred * Explain the commercial documents used for confirming loading/unloading of goods | * Use weighbridge to weigh the vessel * Identify the appropriate PPE to be used * Demonstrate the safe handling procedures for different types of liquids * Demonstrate the usage of different types of pipe, valve and measuring gauge setup for cargo transfer * Demonstrate the liquid loading/unloading and measuring process * Record volume of goods transferred * Prepare the commercial documents used for confirming loading/unloading of goods |
| **Classroom Aids** | |
| Charts, Models, Video presentation, Flip Chart, Whiteboard/Smart Board, Marker, Board eraser | |
| **Tools, Equipment and Other Requirements** | |
| Liquid transport vehicle, loading/unloading pumps and related equipment, SOP, worksheets, computer, projector, stationery etc. | |

Module 4: Guidelines on integrity and ethics

***Mapped to LSC/N9904, v1.0***

**Terminal Outcomes:**

* Explain the concepts of integrity, ethics
* Detail the various regulatory requirements related to logistics industry

|  |  |
| --- | --- |
| Duration: *20:00* | Duration: *35:00* |
| **Theory – Key Learning Outcomes** | **Practical – Key Learning Outcomes** |
| * Describe the concepts of integrity, ethics * Detail the various regulatory requirements related to logistics industry * Explain data and information security practices * Identify corrupt practices * Comply to regulatory requirements * Practice code of conduct and etiquettes * Document all integrity and ethics violations * Explain escalation matrix for reporting deviation | * Practice the principles of integrity and ethics * Follow the various regulatory requirements related to logistics industry * Perform data and information security practices * Identify corrupt practices * Comply to regulatory requirements * Practice code of conduct and etiquettes * 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** | |
|  | |

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* |
| **Theory – Key Learning Outcomes** | **Practical – Key Learning Outcomes** |
| * Detail health, safety and security procedures in warehouse * Describe the 5S to be followed * Explain the inspection procedure to ensure appropriate and safe conditions of activity area and equipment * Discuss unsafe working conditions * Describe the inspection procedure to check safe handling of hazardous goods * Discuss the standard protocol to be followed during emergency situations, accidents and breach pf safety * Document health, safety and security violations * Explain the escalation matrix for reporting deviation | * Follow health, safety and security procedures in warehouse * Implement 5S at 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 |
| **Classroom Aids** | |
| Charts, Models, Video presentation, Flip Chart, Whiteboard/Smart Board, Marker, Board eraser | |
| **Tools, Equipment and Other Requirements** | |
| PPEs, MHEs like Forklift, Reach stacker, pallet truck, etc., barcode scanner, packing devices, packing material, markers and stationery, etc | |

# 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** |
| * 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 associated financial and legal risks with its mitigation plan * 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 | * 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 * 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 |
| **Classroom Aids** | |
| Charts, Models, Video presentation, Flip Chart, Whiteboard/Smart Board, Marker, Board eraser, UPS, LCD Projector, Computer Tables & chairs | |
| **Tools, Equipment and Other Requirements** | |
| 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 | |

## Module 7: Transportation of Gaseous Products

***Mapped to LSC/N4304, v1.0***

**Terminal Outcomes:**

* Detail the steps to be followed for effective transportation of gaseous products

|  |  |
| --- | --- |
| Duration: *30:00* | Duration: *30:00* |
| **Theory – Key Learning Outcomes** | **Practical – Key Learning Outcomes** |
| * Describe the vehicle fitness requirements for transporting gaseous products * Explain the safety and security measures and PPE to be adopted for transport of different types of gas * Discuss the process of operating flow, controlling and monitoring valves and gauges in transport vehicle * Describe the basic maintenance process of equipment in transport vehicle * Detail the safe driving, loading and unloading procedures * Explain the safety and security steps to be undertaken in case of leaks, accidents and damages | * Inspect the vehicle fitness requirements for transporting gaseous products * Identify the PPE to be used * Demonstrate the safe handling practices to be adopted for transportation of different types of gas * Operate flow, control and monitoring valves and gauges in transport vehicle * Undertake basic maintenance of equipment in transport vehicle * Demonstrate safe driving, loading and unloading procedures * Perform the safety and security steps to be undertaken in case of leaks, accidents and damages * Report leaks, accidents and damages |
| **Classroom Aids** | |
| Charts, Models, Video presentation, Flip Chart, Whiteboard/Smart Board, Marker, Board eraser | |
| **Tools, Equipment and Other Requirements** | |
| Gaseous product transport vehicle, loading/unloading pumps and related equipment, SOP, worksheets, computer, projector, stationery etc. | |

## Module 8: Transportation of Chemical and POL Products

***Mapped to LSC/N4305, v1.0***

**Terminal Outcomes:**

* Detail the steps to be followed for effective transportation of chemical and POL products

|  |  |
| --- | --- |
| Duration: *30:00* | Duration: *30:00* |
| **Theory – Key Learning Outcomes** | **Practical – Key Learning Outcomes** |
| * Describe vehicle fitness requirements for transporting chemical and POL products * Use weighbridge to weigh the truck * Explain the safety and security measures and PPE to be adopted for transport of different types of products * Discuss the process of operating flow, controlling and monitoring valves and gauges in transport vehicle * Describe the basic maintenance process of equipment in transport vehicle * Detail the safe driving, loading and unloading procedures * Explain the safety and security steps to be undertaken in case of leaks, accidents and damages | * Inspect the vehicle fitness requirements for transporting chemical and POL products * Identify the PPE to be used * Demonstrate the safe handling practices to be adopted for transportation of different types of products * Operate flow, control and monitoring valves and gauges in transport vehicle * Undertake basic maintenance of equipment in transport vehicle * Demonstrate safe driving, loading and unloading procedures * Perform the safety and security steps to be undertaken in case of leaks, accidents and damages * Report leaks, accidents and damages |
| **Classroom Aids** | |
| Charts, Models, Video presentation, Flip Chart, Whiteboard/Smart Board, Marker, Board eraser | |
| **Tools, Equipment and Other Requirements** | |
| Chemical and POL product transport vehicle, loading/unloading pumps and related equipment, SOP, worksheets, computer, projector, stationery etc. | |

**Module 9: Transportation of Edible Oil Products**

***Mapped to LSC/N4306, V1.0***

**Terminal Outcomes:**

* Detail the steps to be followed for effective transportation of edible oil products

|  |  |
| --- | --- |
| Duration: *30:00* | Duration: *30:00* |
| **Theory – Key Learning Outcomes** | **Practical – Key Learning Outcomes** |
| * Describe vehicle fitness requirements for transporting edible oil products * Explain the safety and security measures to be undertaken and corresponding PPE to be used * Explain the process of checking vehicle tank for contamination * Discuss the process of operating flow, controlling and monitoring valves and gauges in transport vehicle * Detail the safe driving, loading and unloading procedures * Explain the safety and security steps to be undertaken in case of leaks, accidents and damages | * Inspect the vehicle fitness requirements for edible oil products * Use weighbridge to weigh the truck * Identify the PPE to be used * Demonstrate the safe handling practices to be adopted * Inspect vehicle tank for contamination * Operate flow, control and monitoring valves and gauges in transport vehicle * Demonstrate safe driving, loading and unloading procedures * Perform the safety and security steps to be undertaken in case of leaks, accidents and damages * Report vehicle contamination leaks, accidents and damages |
| **Classroom Aids** | |
| Charts, Models, Video presentation, Flip Chart, Whiteboard/Smart Board, Marker, Board eraser | |
| **Tools, Equipment and Other Requirements** | |
| Edible oil transport vehicle, loading/unloading pumps and related equipment, SOP, worksheets, computer, projector, stationery etc. | |

**Module 10: Transport Coordination and Consignment Tracking Activities**

***Mapped to LSC/N1005, V1.0***

**Terminal Outcomes:**

* Detail the steps to be followed for liquid transport coordination and consignment tracking

|  |  |
| --- | --- |
| Duration: *30:00* | Duration: *30:00* |
| **Theory – Key Learning Outcomes** | **Practical – Key Learning Outcomes** |
| * Detail the process of calculating transport vehicle capacity based on available trucks and pre-booked load * Explain the importance of transport schedule for incoming and outgoing trucks and goods * Describe the process of planning optimal route based on destination * Detail the process of truck allocation based on available capacity and transportation load * Discuss the process of examining expenditure statements to identify deviation from norms * Describe vehicle inspection and monitoring procedure * Discuss goods tracking using IT/ERP and report * Describe cargo movement related query/ grievance redressal process | * Compute transport vehicle capacity based on available trucks and pre-booked load * Prepare transport schedule based on incoming and outgoing trucks and goods * Plan optimal route based on destination * Allocate trucks for goods based on available capacity and transportation load * Perform route and volume consolidation * Inspect goods for damages, loss, pilferage * Analyse expenditure statements to identify deviation from norms * Demonstrate vehicle inspection and monitoring procedure * Report goods transported, damages, loss, pilferage, vehicle maintenance requirements etc. * Demonstrate goods tracking using IT/ERP and report * Demonstrate cargo movement related query/ grievance redressal process |
| **Classroom Aids** | |
| Charts, Models, Video presentation, Flip Chart, Whiteboard/Smart Board, Marker, Board eraser | |
| **Tools, Equipment and Other Requirements** | |
| MS Project, MS Office, Computer, Projector, TV, Stationery, Worksheets, Reefer vehicle, loading dock, MHE equipment such as pallet trucks &, forklifts, pallets, crates, sample products, weighing tables, standard formats, temperature control systems, PPE etc. | |

# Annexure

## Trainer Requirements

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Trainer Prerequisites | | | | | | |
| Minimum Educational Qualification | **Specialization** | **Relevant Industry Experience** | | **Training Experience** | | **Remarks** |
| ***Years*** | ***Specialization*** | ***Years*** | ***Specialization*** |  |
| Class X |  | 4 years | Liquid Transport | 1 | Liquid Transport |  |

|  |  |
| --- | --- |
| Trainer Certification | |
| Domain Certification | **Platform Certification** |
| Certified for Job Role: “Liquid Transport Operator” mapped to QP: “LSC/Q4301, v2.0”. Minimum accepted score is 80% | Recommended that the Trainer is certified for the Job Role: “Trainer”, mapped to the Qualification Pack: “MEP/Q2601”. Minimum accepted score is 80% |

## Assessor Requirements

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Assessor Prerequisites | | | | | | |
| Minimum Educational Qualification | **Specialization** | **Relevant Industry Experience** | | **Training/Assessment Experience** | | **Remarks** |
| ***Years*** | ***Specialization*** | ***Years*** | ***Specialization*** |  |
| Class X |  | 4 | Liquid Transport | 1 | Liquid Transport |  |

|  |  |
| --- | --- |
| Assessor Certification | |
| Domain Certification | **Platform Certification** |
| Certified for Job Role: “ Liquid Transport Operator ” mapped to QP: “LSC/Q4301, v2.0”. Minimum accepted score is 80% | Recommended that the Assessor is certified for the Job Role: “Assessor”, mapped to the Qualification Pack: “MEP/Q2601”. Minimum accepted score is 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 is 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.

1. **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.
2. **On-Job Training:** OJT would be evaluated based on standard log book capturing departments worked on, key observations of learner, feedback and remarks of supervisor or mentor.
3. **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:
   1. True / False Statements
   2. Multiple Choice Questions
   3. Matching Type Questions.
   4. Fill in the blanks
   5. Scenario based Questions
   6. 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 |
| Declarative Knowledge | Declarative knowledge refers to facts, concepts and principles that need to be known and/or understood in order to accomplish a task or to solve a problem. |
| 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 |
| Procedural Knowledge | Procedural knowledge addresses how to do something, or how to perform a task. It is the ability to work, or produce a tangible work output by applying cognitive, affective or psychomotor skills. |
| 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 |
|  |  |
|  |  |
|  |  |