

NSQF QUALIFICATION FILE

Approved in 27th NSQC Meeting-NCVET-Dated 28-02-2023

CONTACT DETAILS OF THE BODY SUBMITTING THE QUALIFICATION FILE

Name and address of submitting body:

Logistics Sector Skill Council

No. 480 A, 7th floor Khivraj Complex 2, Anna Salai, Nandanam, Chennai – 600 035

Name and contact details of individual dealing with the submission

Name : Ms. Reena Murray
Position in the Organization : Head – Standards & Quality Assurance
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List of documents submitted in support of the Qualifications File

1. Model Curriculum having indicative list of equipment, lesson plan with training duration and trainer qualification.
2. Letter from the Ministry supporting the need of the qualification.
3. Industry validations

Model Curriculum to be added which will include the following:

- Indicative list of tools/equipment to conduct the training
- Trainers' qualification
- Lesson Plan
- Distribution of training duration into theory/practical/OJT component

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• SUMMARY

1	Qualification Title	Refrigeration Equipment Maintenance Specialist
2	Qualification Code, if any	LSC/Q9101
3	NCO code and occupation	<ul style="list-style-type: none"> NCO-2015/ NIL
4	Nature and purpose of the qualification (Please specify whether qualification is short term or long term)	<p>Nature: Certificate course of Refrigeration Equipment Maintenance Specialist</p> <p>Term: Long Term</p> <p>Purpose: Learners who attain this qualification are competent in planning and monitoring the maintenance of refrigeration equipment, handling their repair and service support. They would be able to land jobs in cold chain units, cold storages, warehouses with dedicated reefer sections and reefer transport companies.</p>
5	Body/bodies which will award the qualification	Logistics Sector Skill Council
6	Body which will accredit providers to offer courses leading to the qualification	Logistics Sector Skill Council
7	Whether accreditation/affiliation norms are already in place or not, if applicable (if yes, attach a copy)	<p>Yes</p> <p>Both accreditation and affiliation are done by LSC based on due diligence report via SIP</p>
8	Occupation(s) to which the qualification gives access	Maintenance
9	Job description of the occupation	The individual at work prepares refrigeration equipment maintenance schedule checklist and monitors its preventive maintenance. The person is also responsible to oversee service and repair of cold chain equipment like condenser, compressor and evaporators, provide manpower and material resources to maintenance technicians, train plant engineers on handling and maintenance of refrigeration equipment
10	Licensing requirements	Not Applicable
11	Statutory and Regulatory requirement of the relevant sector (documentary evidence to be provided)	Not Applicable

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12	Level of the qualification in the NSQF	5
13	Anticipated volume of training/learning required to complete the qualification	570 hours
14	Indicative list of training tools required to deliver this qualification	<p>For a class of 30 candidates</p> <p>Teaching board – 1 Projector – 1 White board - 1 Video player or TV – 1 Printer – 1 Computers – 15 Stationaries – 30 Marker – 2 Compressor - 1 Condenser 1 Evaporator-1 insulation equipment/ system - 1 cold room setup - 1 piping set up - 2 Leak detection system - 1 Piping system - 1 Monitor and control systems - 1 Pressure gauges -1</p>
15	Entry requirements and/or recommendations and minimum age	<p>Completed 2nd year of UG/ Diploma in Mechanical / Electrical / Electronical / Refrigeration engineering Or Pursuing 2nd year of UG/ Diploma and continuous education in Mechanical / Electrical / Electronical / Refrigeration engineering Or 12th Grade pass + 2 year cold chain experience in handling refrigeration equipment Or Previous relevant Qualification of NSQF Level 4 (in cold chain) and with minimum education as 8th Grade pass + 3 year relevant experience in cold storage/ refrigeration/ air conditioning equipment maintenance operations as an apprentice or in regular employment</p>
16	Progression from the qualification (Please show	Professional - After completion of course and after 2-3 years of experience in cold room operations, a person can progress horizontally across land transportation and

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	Professional and academic progression)	warehousing and vertically as cold chain engineering specialist and cold chain lead.		
		Academic – 1. For a Diploma – Graduation is the next stage of progression		
17	Arrangements for the Recognition of Prior learning (RPL)	LSC currently undertakes RPL through the following modes – 1. The companies outreach to LSC regarding their requirement for RPL. LSC arranges for a trainer or a training agency to conduct the short term RPL program post which, LSC member conducts assessment and provide accreditation/ certification for the same 2. The training Centre run RPL courses in coordination with industry and companies and post the course conduct assessment and certification 3. The companies reach out to LSC regarding RPL requirements. They conduct their own training as per the RPL requirements and post training LSC reviews and provides certifications regarding RPL 4. LSC has developed an online RPL assessment application which will be MCQ based test and VIVA video submission.		
18	International comparability where known (research evidence to be provided)	Under Study		
19	Date of planned review of the qualification.	28 th February 2026		
20	Formal structure of the qualification			
		Mandatory/ Optional	Estimated size (learning hours)	Level
A	Mandatory components			
	Introduction	Mandatory	30	5

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	LSC/N9101 Plan the maintenance of refrigeration equipment	Mandatory	90	5
	LSC/N9102 Monitor the maintenance of refrigeration equipment	Mandatory	90	5
	LSC/N9103 Oversee service and repair refrigeration equipment	Mandatory	90	5
	LSC/N9104 Undertake training for plant engineers	Mandatory	90	5
	LSC/N9901 Maintain food and personnel safety, health and hygiene in cold storage plant	Mandatory	60	5
	LSC/N9902 Communicate effectively with colleagues and clients	Mandatory	60	5
	DGT/VSQ/N0102 Employability Skills	Mandatory	60	5
	Sub Total (A)		570 Hrs.	
B	Optional/elective component	Mandatory/ Optional	Estimated size (learning hours)	Level
	Nil			
	Sub Total (B)			
	Total (A+B)		570 Hrs.	

SECTION 1**ASSESSMENT**

21	Body/Bodies which will carry out assessment: All the empanelled assessment agency will do the assessment
22	How will RPL assessment be managed and who will carry it out? RPL courses would be conducted based on the demand and requirement of industry as and when they approach LSC. There are three ways of conducting RPL assessments - <ol style="list-style-type: none">1. The companies outreach to LSC regarding their requirement for RPL. LSC arranges for a trainer or a training agency to conduct the short term RPL program post which, LSC member conducts assessment and provide accreditation/ certification for the same2. The training Centre run RPL courses in coordination with industry and companies and post the course conduct assessment and certification3. The companies reach out to LSC regarding RPL requirements. They conduct their own training as per the RPL requirements and post training LSC reviews and provides certifications regarding RPL4. LSC developed an online RPL assessment application which will be MCQ based test and VIVA video submission.
23	Describe the overall assessment strategy and specific arrangements which have been put in place to ensure that assessment is always valid, reliable and fair and show that these are in line with the requirements of the NSQF. LSC has ensured to have a valid, consistent and fair show of assessments by having an assessment policy and process in place and LSC has also set the minimum qualification and experience criteria. Assessment policy of LSC <ol style="list-style-type: none">1) All the assessments have to be carried out based on the criteria code set by LSC in qualification packs.2) Qualification and experience have to be set for the assessors.3) LSC will insist the assessment body to hire honest and fair assessors with relevant experience prescribed by LSC.4) Assessment bodies will strictly stick to the norms prescribed by LSC when conducting assessments.5) Assessment schedules have to strictly adhere to as agreed in advance by assessment body and LSC.

- 6) Reporting of MIS by the assessment body to LSC has to be within the agreed time lines.
- 7) Assessment bodies have to ensure that assessments are conducted in a fair and honest manner
- 8) Any negative remark on the assessor or assessment body if proven will be black listed by LSC
- 9) Assessment tools should be designed to test both practical skills and theoretical knowledge.
- 10) Parameters for assessing student's abilities or understanding should be aligned to the relevant competencies that are expected to be acquired at the end of the training.
- 11) Expected standards of performance for each competency should be clearly defined and Student's performance assessed against these standards.
- 12) Questionnaires/ test papers should be as objective as possible (restrict use of open-ended questions to the minimum) such as multiple-choice questions, yes/no or True / False types based on blue print.
- 13) Questions framed as per blueprint and without ambiguity by SMEs.
- 14) All assessments should be scored carefully and a log of all scores for every candidate Maintained.
- 15) Hard copies and soft copies of assessment forms and scores should be maintained and be readily available for any audit by LSC / NSDC or third party

Assessment strategy:

Assessment process to be adhered by assessment bodies and LSC

- 1) Logistics Sector Skill Council to inform the assessment body on assessment details at least 2 weeks in advance
- 2) Assessment body to appoint an assessor for the assessment details shared by Logistics Sector Skill Council and inform the assessor details to Logistics Sector Skill Council at least 1 week in advance from the date of assessment.
- 3) Assessment bodies to design the question paper for theory, practical & viva as per blueprint and submit to logistics sector skill council while empanelment of AA.
- 4) Logistics Sector Skill Council to approve the Question banks within 7 days from submission.
- 5) Assessment bodies to ensure that the assessor reaches the assessment location at least before 1 hr in advance from the time of assessment.
- 6) Assessor to start the assessment exactly on the time instructed by Logistics Sector Skill Council.
- 7) Assessor to verify the candidates with any valid Govt. id preferably Aadhar and also collect a copy of ID proof produced by the candidate.
- 8) Assessor to record all the evidence as per assessment protocol of Logistics Sector Skill Council

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- 9) Assessment bodies to submit the result to logistics sector skill council within 3 days of time from the date of assessment through LSC MIS portal.
- 10) Assessment bodies to submit the result in Skill India Portal within 2 days of time from the date of LSC approval in LSC MIS portal.
- 11) Assessment body to maintain hard and soft copies of assessment sheets and produce to Logistics Skills Council on demand.
- 12) To pass the Qualification Pack, every trainee should score a minimum of 70% for NSQF level 4 & above job roles and 50% for NSQF level 1 to 3 job roles.
- 13) In case of unsuccessful completion, the trainee may seek Re-Assessment on the QP.

2. ASSESSORS – Eligible assessors will get certification through TOA programme with 2 years validity

The eligibility of assessors for this job role “Refrigeration Equipment Maintenance Specialist” are as follows:

- Any degree
- 2 years of industrial experience

3. ELIGIBILITY TO APPEAR IN THE EXAM:

Minimum Educational Qualification:

Completed 2nd year of UG/ Diploma in Mechanical / Electrical / Electronical / Refrigeration engineering

Or Pursuing 2nd year of UG/ Diploma and continuous education in Mechanical / Electrical / Electronical / Refrigeration engineering

Or 12th Grade pass + 2 year cold chain experience in handling refrigeration equipment

Or Previous relevant Qualification of NSQF Level 4 (in cold chain) and with minimum education as 8th Grade pass + 3 year relevant experience in cold storage/ refrigeration/ air conditioning equipment maintenance operations as an apprentice or in regular employment

4. MARKING SCHEME:

Sr. No.	Method of Assessments	Weightage (Max. marks)
1	Theory	30%
2	Practical	70%
Total		100

5. PASSING MARKS: Every trainee should score minimum 70% in every NOS.

6. RESULTS AND CERTIFICATION: Logistics Sector Skill Council

Please attach most relevant and recent documents giving further information about assessment and/or RPL.

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Give the titles and other relevant details of the document(s) here. Include page references showing where to find the relevant information.

ASSESSMENT EVIDENCE

Complete a grid for each component as listed in “Formal structure of the qualification” in the Summary.

NOTE: this grid can be replaced by any part of the qualification documentation which shows the same information – i.e., Learning Outcomes to be assessed, assessment criteria and the means of assessment.

24. Assessment evidence

1. LSC has created 16 points check list to collect on the day of assessment.
2. Assessment agencies must ensure to collect all the evidence without fail.
3. Training Partner must cooperate on collecting assessment evidence.
4. Candidates must present with their original Aadhaar's and alternative id proof which is having clear face picture on the day of assessment.
5. Assessment agency must submit all the collected evidence through LSC MIS portal.

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Sr. No.	Outcomes to be assessed	Assessment criteria for the outcome
1	LSC/N9101 - Plan the maintenance of refrigeration equipment	To be competent, the user/ individual must be able to 1.1. prepare work program and schedules for maintenance of evaporator, condenser and compressor 1.2. prioritize maintenance as per legislative laws, organization requirements, resources, and environment 1.3. electrical system maintenance at least once in five years as per the Institute of Electrical and Electronics Engineers Code of Practice 1.4. plan to check evaporators for defrosting and coil surface for dust accumulation 1.5. ensure to check electrical connections for corroded terminals 1.6. ensure that the maintenance plan checks oil safety and high-pressure controls of compressor units 1.7. record the schedules for preventive maintenance 1.8. plan activities so as to minimize disruption to normal working 1.9. ensure to schedule seasonal maintenance 1.10. make contingency plans for emergency situations regarding working of the equipment 1.11. identify resources for maintenance based on the skills required 1.12. allocate resources for each maintenance activity 1.13. make contingency plans for variations in labor availability 1.14. provide checklists for maintenance activities 1.15. provide information on priority and deadlines for the tasks, so that losses are minimized 1.16. provide necessary tools, components and protective gear to carry out maintenance activities
2	LSC/N9102 - Monitor maintenance of refrigeration equipment	To be competent, the user/ individual must be able to

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		<p>2.1 inspect regularly to ensure maintenance activities are done as per quality requirements</p> <p>2.2 inspect regularly to ensure maintenance activities are completed timely</p> <p>2.3 inspect regularly to ensure maintenance activities are done within the costs planned</p> <p>2.4 ensure that the quality of the products stored under refrigeration is not harmed while equipment components are being checked</p> <p>2.5 ensure that there is safe discharge of ammonia, so that excess refrigerant is discharged safely (not inside cold room and away from work area)</p> <p>2.6 ensure to keep drains in the cold area free of debris</p> <p>2.7 ensure to check operations of door seals regularly</p> <p>2.8 monitor the sequence of activities as per the schedule</p> <p>2.9 ensure workers are using protective gear during maintenance or repair</p> <p>2.10 ensure workers leave the area safe and clean after performing maintenance activities</p> <p>2.11 ensure that the equipment is calibrated correctly before use</p> <p>2.12 assign a resource to maintain records of refrigeration equipment maintenance activities regularly</p> <p>2.13 conduct regular checks on maintenance log to see if it is current</p> <p>2.14 instruct concerned person to update records if it is not latest</p> <p>2.15 report to all concerned people in the organization in case the schedule cannot be met</p> <p>2.16 carry out walk around inspection regularly to monitor activities of subordinates</p> <p>2.17 communicate with workers as often as needed to ensure maintenance schedule is followed</p> <p>2.18 allocate parallel tasks to handle different components of refrigeration equipment like</p>

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Sr. No.	Outcomes to be assessed	Assessment criteria for the outcome
		evaporator, compressor and condenser, wherever possible 2.19 observe the work efficiency of the workforce and identify training needs wherever necessary
3	LSC/N9103 - Oversee service and repair of refrigeration equipment	To be competent, the user/ individual must be able to: <ul style="list-style-type: none"> 3.1 plan types of maintenance activities based on manufacturer's instructions 3.2 plan the frequency of maintenance activities 3.3 consider industry level standard practices while planning maintenance 3.4 understand procedures while removing or replacing an evaporator or a compressor 3.5 carry out tests or checks regularly to ensure system is working as required 3.6 check for freezer insulation degradation by observing compressor duty cycle, condensation or presence of ice 3.7 check operation of defrost system and thermostat 3.8 plan repairs limited to thermostats, electrical systems, start relays and defrost timers as much as possible 3.9 avoid repairs to the cooling system, if they are uneconomical, and consider replacement of components 3.10 inspect cold store ceiling panel suspension rods and also their attachments at least once a year 3.11 check discharge pressure and suction pressure in control system and make adjustments if necessary 3.12 ensure that service or repair activities follow hygiene procedures 3.13 trace faults in the components of refrigeration system when it arises 3.14 test the working of the equipment, after service or repair 3.15 ensure that the equipment is calibrated correctly before using

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Sr. No.	Outcomes to be assessed	Assessment criteria for the outcome
		<p>3.16 maintain records of service and repair of refrigeration, electrical system, equipment components</p> <p>3.17 analyze the records to arrive at the performance of refrigerated equipment in terms of operating efficiency, downtime and conformity to the requirements</p>
4	LSC/N9104 - Undertake training for plant engineers	<p>To be competent, the user/individual must be able to:</p> <p>4.1 train plant engineers to follow safety procedures while handling refrigerants</p> <p>4.2 provide information on hazardous effects of refrigerants to the environment</p> <p>4.3 train them to ensure refrigerant leaks do not enter work areas or closed room</p> <p>4.4 train plant engineers on complying with procedures and practices to maintain refrigeration equipment</p> <p>4.5 teach them procedures while removing or replacing an evaporator, condenser or compressor</p> <p>4.6 provide maintenance history details of the refrigeration equipment, to help in familiarizing with the routine requirements</p> <p>4.7 sensitize plant engineers on energy consumption of refrigeration equipment</p> <p>4.8 provide information on dismantling refrigeration components to trace faults</p> <p>4.9 train plant engineers to inspect the components in need of repair or service</p> <p>4.10 teach plant engineers to reinstate components into the refrigeration equipment</p> <p>4.11 train plant engineers to understand control circuit diagrams of the refrigeration system</p> <p>4.12 train plant engineers on usage of appropriate tools and techniques while handling repairs of evaporators, condensers or compressors</p> <p>4.13 train plant engineers on undertaking numerical calculations or data entry mechanisms required for the activities</p>

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		4.14 train them on emergency responses in case of malfunctioning of refrigeration equipment as a whole or its components like evaporator, condenser or compressor
5	LSC/N9901 - Maintain food and personnel safety, health and hygiene in cold storage plant	<p>To be competent, the user/ individual must be able to:</p> <ul style="list-style-type: none"> 5.1 assess the various health, safety and environmental hazards in the cold storage 5.2 take necessary steps to eliminate or minimize the hazards 5.3 analyse the causes of accidents at the workplace 5.4 take preventive measures to avoid risk of cold burns and other injury due to contact with hot surfaces, gas, fire, hot fluids/ liquids, etc. 5.5 ensure the employees have access to first aid kit when needed 5.6 ensure to use personal protective equipment and safety gear such as gloves, jacket, footwear etc. for loading and unloading material in cold rooms to protect themselves from hypothermia, frostbite etc 5.7 ensure to display safety signs at places where necessary for people to be cautious 5.8 use rubber mats in the places where floors are constantly wet 5.9 ensure electrical precautions such as insulated clothing, adequate equipment insulation, dry work area, switch off the power supply when not required, etc 5.10 display emergency exit plan at prominent places and have emergency assembly area earmarked as a grid for easy counting of on duty associates and workers. 5.11 unplug the control panel, compressor, condenser etc before performing maintenance 5.12 report to the superior on any problems and hazards identified 5.13 install fire alarms (electrical/manual) in cold store/deep freeze and keep other safety

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Sr. No.	Outcomes to be assessed	Assessment criteria for the outcome
		<p>devices like hammer/mallet in the storage area</p> <p>5.14 maintain appropriate ventilation in the cold rooms to avoid unacceptable accumulation of heat, condensation or odours</p> <p>5.15 check and review the cold storage areas frequently</p> <p>5.16 stack items in an organized way and use safe lifting techniques to reduce risk of injuries from handling procedures at the storage areas</p> <p>5.17 ensure no sign of pest infestation and install rodent traps, fly glues and insectocutors wherever needed</p> <p>5.18 follow hygiene & sanitation standards of Government bodies like FSSAI, APEDA and /or EIA or importing countries like FAO, EU standards after PC 20</p> <p>5.19 use effective loading and unloading systems</p> <p>5.20 proper stock rotation (First in First out) to be practised</p> <p>5.21 segregate damaged/ non-conforming products from other products to designate area for appropriate disposition</p> <p>5.22 fumigate containers depending upon product and contamination or as per customers' requirement</p> <p>5.23 avoid smoking, spitting, eating etc near food storage area</p> <p>5.24 ensure reefers are covered, clean, free from pest infestation & other contaminants</p> <p>5.25 dispose cold storage plant waste in the designated areas safely as per company's policies and rules</p> <p>5.26 ensure to be safe while handling machines (generator, compressor, condenser etc), gas (ammonia) and chemicals (ethylene, refrigerants etc)</p> <p>5.27 keep the floors free from oil, water and grease to avoid slippery surface</p>

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Sr. No.	Outcomes to be assessed	Assessment criteria for the outcome
		<p>5.28 cut nails regularly and avoid applying nail paint. Avoid wearing bangles, rings, and chains in cold storage</p> <p>5.29 wash hands with soap solution and dry under a dryer as they enter for duty or after using wash room</p> <p>5.30 periodic examination of protective devices, pressure vessels and pipelines, and parts of pipework by a competent person to prevent defect that may give rise to danger</p> <p>5.31 ensure workers suffering from abscess, boils etc should be relieved from food handling</p> <p>5.32 develop personal hygiene habits like brushing teeth, taking shower everybody, wearing clean and tidy clothes after ironing etc</p>
6	LSC/N9902 - Communicate effectively with colleagues and clients	<p>To be competent, the user/ individual must be able to:</p> <p>6.1 understand the work output requirements, targets, performance indicators and incentives</p> <p>6.2 deliver quality work on time and report any anticipated reasons for delays</p> <p>6.3 escalate unresolved problems or complaints to the relevant superior</p> <p>6.4 communicate project progress proactively to the superior</p> <p>6.5 receive feedback on work standards</p> <p>6.6 document the completed work schedule and handover to the superior</p> <p>6.7 exhibit trust, support and respect to all the colleagues in the workplace</p> <p>6.8 aim to achieve hassle free cold chain operation</p> <p>6.9 help and assist colleagues with information and knowledge</p> <p>6.10 seek assistance from the colleagues when required</p> <p>6.11 identify the potential and existing conflicts with the colleagues and resolve</p>

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		<p>6.12 pass on essential information to other colleagues on timely basis</p> <p>6.13 maintain the etiquette, use polite language, demonstrate responsible and disciplined behaviours to the colleagues</p> <p>6.14 interact with colleagues from different departments: ripening chamber, cold storage, transport, packhouse etc to effectively carry out the work among the team and understand the nature of their work</p> <p>6.15 put team over individual goals and multi task or share work where necessary supporting the colleagues</p> <p>6.16 highlight any errors of colleagues, help to rectify and ensure quality output</p> <p>6.17 work with cooperation, coordination, communication and collaboration, with shared goals and supporting each other's performance</p> <p>6.18 ask relevant questions to the client and identify their needs</p> <p>6.19 possess strong knowledge on market and cold chain operation</p> <p>6.20 brief the client clearly on potential costs and challenges involved in the cold chain industry</p> <p>6.21 communicate with the client in a polite, professional and friendly manner</p> <p>6.22 build effective but impersonal relationship with the client</p> <p>6.23 ensure the appropriate language and tone are used with clients</p> <p>6.24 listen actively and have a two-way communication</p> <p>6.25 be sensitive to the gender, cultural and social differences such as modes of greeting, formality, etc.</p> <p>6.26 understand the client expectations correctly and provide the appropriate products and services</p>

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		<p>6.27 understand the client dissatisfaction and address or escalate their complaints effectively</p> <p>6.28 maintain a positive, sensible and cooperative manner all time</p> <p>6.29 ensure to maintain a proper body language, dress code, gestures and etiquettes towards the client</p> <p>6.30 avoid interrupting the client while they talk</p> <p>6.31 ensure to avoid negative questions and statements to the client</p> <p>6.32 inform the client on any issues or problems before hand and also on the developments involving them</p> <p>6.33 ensure to respond back to the client immediately for their voice messages, e-mails, apps, etc.</p> <p>6.34 develop good rapport with the client and promote other products and services</p> <p>6.35 seek feedback from the client on their understanding to what was discussed</p> <p>6.36 explain the terms and conditions clearly</p>
7	DGT/VSQ/N0102 Employability NOS	<p>After completing this programme, participants will be able to:</p> <p>7.1 Discuss the Employability Skills required for jobs in various industries</p> <p>7.2 List different learning and employability related GOI and private portals and their usage</p> <p>7.3 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</p> <p>7.4 Show how to practice different environmentally sustainable practices.</p> <p>7.5 Discuss importance of relevant 21st century skills.</p> <p>7.6 Exhibit 21st century skills like Self-Awareness, Behavior Skills, time</p>

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		<p>management, critical and adaptive thinking, problem-solving, creative thinking, social and cultural awareness, emotional awareness, learning to learn etc. in personal or professional life.</p> <p>7.7 Describe the benefits of continuous learning.</p> <p>7.8 Show how to use basic English sentences for everyday conversation in different contexts, in person and over the telephone</p> <p>7.9 Read and interpret text written in basic English</p> <p>7.10 Write a short note/paragraph / letter/e -mail using basic English</p> <p>7.11 Create a career development plan with well-defined short- and long-term goals</p> <p>7.12 Demonstrate how to communicate effectively using verbal and nonverbal communication etiquette.</p> <p>7.13 Explain the importance of active listening for effective communication</p> <p>7.14 Discuss the significance of working collaboratively with others in a team</p> <p>7.15 Demonstrate how to behave, communicate, and conduct oneself appropriately with all genders and PwD</p> <p>7.16 Discuss the significance of escalating sexual harassment issues as per POSH act.</p> <p>7.17 Outline the importance of selecting the right financial institution, product, and service</p> <p>7.18 Demonstrate how to carry out offline and online financial transactions, safely and securely</p> <p>7.19 List the common components of salary and compute income, expenditure, taxes, investments etc.</p> <p>7.20 Discuss the legal rights, laws, and aids</p> <p>7.21 Describe the role of digital technology in today's life</p> <p>7.22 Demonstrate how to operate digital devices and use the associated applications and features, safely and</p>

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		<p>securely</p> <p>7.23 Discuss the significance of displaying responsible online behavior while browsing using various social media platforms, e-mails etc., safely and securely</p> <p>7.24 Create sample word documents, excel sheets and presentations using basic features</p> <p>7.25 utilize virtual collaboration tools to work effectively</p> <p>7.26 Explain the types of entrepreneurship and enterprises</p> <p>7.27 Discuss how to identify opportunities for potential business, sources of funding and associated financial and legal risks with its mitigation plan</p> <p>7.28 Describe the 4Ps of Marketing-Product, Price, Place and Promotion and apply them as per requirement</p> <p>7.29 Create a sample business plan, for the selected business opportunity</p> <p>7.30 Describe the significance of analyzing different types and needs of customers</p> <p>7.31 Explain the significance of identifying customer needs and responding to them in a professional manner.</p> <p>7.32 Discuss the significance of maintaining hygiene and dressing appropriately</p> <p>7.33 Create a professional Curriculum Vitae (CV)</p> <p>7.34 Use various offline and online job search sources such as employment exchanges recruitment agencies, and job portals respectively</p> <p>7.35 Discuss the significance of maintaining hygiene and confidence during an interview</p> <p>7.36 Perform a mock interview</p> <p>7.37 List the steps for searching and registering for apprenticeship opportunities</p>

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S. No	Module Name	Duration (hours)	Assessment Marks
1.	Introduction to Employability Skills	1.5	2
2.	Constitutional values - Citizenship	1.5	2
3.	Becoming a Professional in the 21st Century	2.5	6
4.	Basic English Skills	10	6
5.	Career Development & Goal Setting	2	3
6.	Communication Skills	5	4
7.	Diversity & Inclusion	2.5	2
8.	Financial and Legal Literacy	5	5
9.	Essential Digital Skills	10	8
10.	Entrepreneurship	7	4
11.	Customer Service	5	3
12.	Getting Ready for Apprenticeship & Jobs	8	5
	Total	60	50

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SECTION 2

25. EVIDENCE OF LEVEL

Option B – Refrigeration Equipment Maintenance Specialist

Title/Name of qualification/component: Refrigeration Equipment Maintenance Specialist (NSQF – 5)			
NSQF Domain	Outcomes of the Qualification/Component	How the job role relates to the NSQF level descriptors	NSQF Level
Process	<ul style="list-style-type: none">Plan, schedule and implement maintenance and its monitoring	The process involves planning, scheduling and implementing maintenance schedules, monitoring functioning of the refrigeration equipment and coordinating and overseeing the repair and maintenance of equipment. It also involves continuous on job training of plant engineers.	5
Professional knowledge	<ul style="list-style-type: none">Working of different equipment, their specification and limitations, troubleshooting, workforce allocation and monitoring	The job holder knows and understands different types of refrigeration equipment, their connections, specifications and technicalities with respect to operation. S/he knows monitoring of electrical data for checking performance of equipment, scheduling maintenance and allocating workforce, coordinating with external agencies for repair and servicing	5
Professional skill	<ul style="list-style-type: none">Planning, technical skills and management skills are demonstrated by the job holder	The job holder demonstrates planning skills for scheduling of maintenance, servicing and repair, technical skills to analyze outputs and troubles in operation, team management skills when supervising maintenance and learning of plant engineers	5
Core skill	<ul style="list-style-type: none">Mathematical ability to assess electrical outputs, scheduling and planning, coordinating and	The job holder has to demonstrates skills to mathematically analyze outputs to identify requirement for servicing and repair, planning and organizing maintenance runs and coordinate and	5

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	communicating for scheduling maintenance runs, servicing and shutdowns	ensure functioning of the maintenance department in tandem with others	
Responsibility	<ul style="list-style-type: none">For maintenance and running efficiency of the refrigeration equipment as well as learning and output of maintenance engineers	The job holder is responsible for smooth and operation of the refrigeration equipment including its upkeep, maintenance and also for on role training and performance of new engineers in the maintenance department.	5

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SECTION 3

EVIDENCE OF NEED

26 Estimated uptake of Qualification? Basis	What evidence is there that the qualification is needed? What is this qualification and what is the basis of this? (Applicable for SSCs)
Need for the qualification	<p>While collecting data from the companies for the occupational map, we also took feedback from industry players regarding the skill gap that they foresee and select areas where the requirement is immediate and or expected to come in near future for which qualification packs development, was to be prioritized. This was largely based on volume of people required, quantitative and qualitative shortfall which the industry feels they face. Governing council of LSC gave final approval and endorsement for the same.</p> <p>The same are also indicated in various skill studies conducted for the logistic sector –</p> <ol style="list-style-type: none">1. Skill requirement in logistics sector https://drive.google.com/file/d/0B5rqF9xqytDIUIF4WEtyWXJBbIE/view
Industry Relevance	<p>As part of the exercise for development of qualification pack and Q-file, LSC interacted with industry bodies, select companies and collected validation from industry players employing people for this job role in the sub-sector. The details of the industry interaction and validation collected have been shared as a separate folder along with the Q file.</p>
Usage of the qualification	<p>Previously for cold chain no qualification files were developed, this would be the first-time formal training would be conducted in cold chain sub-sector through LSC via NSDC and NSDA. Hence, realisation from past data of training conducted is currently not available</p>
Estimated uptake	<p>Skills Gap Analysis Reports for industry demand and secondary research data, though these do not lead to accurate demand projection. The link to NSDC Human Resource & Skills Requirement in Logistics Sector is</p> <p>https://drive.google.com/file/d/0B5rqF9xqytDIUIF4WEtyWXJBbIE/view?usp=sharing</p> <p>http://www.nccd.gov.in/PDF/CCSG_Final%20Report_Web.pdf</p> <ul style="list-style-type: none">• Feedback from industry players

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27	<p>Recommendation from the concerned Line Ministry of the Government/Regulatory body. To be supported by documentary evidence</p> <p>Letter has been sent via email to line ministry seeking approval</p>
28	<p>What steps were taken to ensure that the qualification(s) does (do) not duplicate already existing or planned qualifications in the NSQF? Give justification for presenting a duplicate qualification</p> <p>NCVET list of Approved and Under-Development QPs was checked prior to commissioning the work</p>
29	<p>What arrangements are in place to monitor and review the qualification(s)? What data will be used and at what point will the qualification(s) be revised or updated? Specify the review process here</p> <ul style="list-style-type: none">• Qualification that has been developed would be valid for 3 years from the date of upload in NQR.• Periodical interaction with the training partners to gather feedback in implementation.• Employer feedback will be sought post-placement on performance and training standards.

Please attach most relevant and recent documents giving further information about any of the topics above.

Give the titles and other relevant details of the document(s) here. Include page references showing where to find the relevant information.

SECTION 4

EVIDENCE OF PROGRESSION

30	<p>What steps have been taken in the design of this or other qualifications to ensure that there is a clear path to other qualifications in this sector?</p> <p><i>Show the career map here to reflect the clear progression</i></p> <p>Occupational and career maps indicating horizontal and vertical mobility have been created and are being used.</p>
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Please attach most relevant and recent documents giving further information about any of the topics above.

Figure 1: Occupational Map of the Cold Chain Logistics Solutions Sector

Subsectors	Cold Chain Logistics Solutions				
Occupations	Cold Chain Operations - (Storage & Transportation)	Packing & Packaging/ Dispatch / Distribution	Maintenance	Engineering	Projects
Occupation # (01-99)	86	89	90	91	92
Level 10	Managing Director/ President, Vice president, Global/country head, Chief general managers				
Level 9					
Level 8					
Level 7	Cold chain lead/ manager				
Level 6				Cold Chain Engineering Specialist	
Level 5	Perishable product handling specialist			Refrigeration equipment maintenance specialist	Process Management Specialist
Level 4	Cold room operator	Loaders/ Unloaders	Cold Chain Packers	Maintenance Executive	Project Associates
	Vehicle Coordinator				
	Reefer Vehicle Operator				
Level 3	Associate (Sorting, Sequencing, Grading)				
Level 2	Delivery boys/ Helpers				
Level 1					

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Figure 2: Career progression path for Refrigeration Equipment Maintenance Specialist

