



Model Curriculum

QP Name: Agriculture Warehouse Worker

QP Code: AGR/Q7502

Version: 3.0

NSQF Level: 3

Model Curriculum Version: 2.0

Agriculture Skill Council of India || Agriculture Skill Council of India (ASCI), 6th Floor, GNG Tower, Plot No. 10, Sector - 44

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Training Parameters

Sector	Agriculture
Sub-Sector	Agriculture Industries
Occupation	Post-Harvest Supply Chain Management
Country	India
NSQF Level	3
Aligned to NCO/ISCO/ISIC Code	NCO-2015/9333.0201
Minimum Educational Qualification and Experience	Minimum Educational Qualification: 8th Class with one year experience OR 8th Class Pass and pursuing continuous regular schooling OR 5th Class pass with 4 Years of relevant experience OR Certificate-NSQF Level-3 (Pack house worker) with 6 months of relevant experience OR Ability to Read and write with 5 Years of experience
Pre-Requisite License or Training	NA
Minimum Job Entry Age	17 Years
Last Reviewed On	17/11/2022
Next Review Date	27/01/2025
NSQC Approval Date	27/01/2022
QP Version	3.0
Model Curriculum Creation Date	27/01/2022
Model Curriculum Valid Up to Date	27/01/2025
Model Curriculum Version	2.0
Minimum Duration of the Course	270 Hours
Maximum Duration of the Course	270 Hours

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 should have acquired the listed knowledge and skills to:

- Demonstrate the process of assisting in unloading, sorting, grading and storing the produce.
- Describe the process of assisting in inventory management, organising and maintaining the stock.
- Demonstrate the process of assisting in preparing and loading the produce for transportation.
- Demonstrate the process of assisting in maintenance and documentation activities.
- Explain the basic entrepreneurial activities for small enterprise.
- Describe the process of undertaking employability and entrepreneurial practices.
- Demonstrate various practices to maintain personal hygiene, cleanliness, and safety at the workplace.

Compulsory Modules

The table lists the modules and their duration corresponding to the Compulsory NOS of the QP.

NOS and Module Details	Theory Duration	Practical Duration	On-the-Job Training Duration (Mandatory)	On-the-Job Training Duration (Recommended)	Total Duration
AGR/N7505 Assist in unloading, sorting, grading and storing the produce NOS Version- 3.0 NSQF Level- 3	20:00	40:00	0:00	0:00	60:00
(Bridge module) Module 1: Introduction to the role of an Agriculture Warehouse Worker	05:00	0:00	0:00	0:00	05:00
Module 2: Process of assisting in unloading, sorting, grading and storing the produce	15:00	40:00	0:00	0:00	55:00
AGR/N7507 Assist in inventory management, organizing and maintaining the stock NOS Version- 3.0 NSQF Level- 3	20:00	40:00	0:00	0:00	60:00
Module 3: Process of assisting in inventory management, organising and maintaining the stock	20:00	40:00	0:00	0:00	60:00

AGR/N7508 Assist in preparing and loading the produce for Transportation NOS Version- 3.0 NSQF Level- 3	20:00	40:00	0:00	0:00	60:00
Module 4: Process of assisting in preparing and loading the produce for transportation	20:00	40:00	0:00	0:00	60:00
AGR/N7509 Assist in the maintenance and documentation activities NOS Version-3.0 NSQF Level- 3	10:00	20:00	0:00	0:00	30:00
Module 5: Process of assisting in maintenance and documentation activities	10:00	20:00	0:00	0:00	30:00
AGR/N9903 Maintain health and safety at the workplace NOS Version- 4.0 NSQF Level-4	20:00	10:00	0:00	0:00	30:00
Module 6: Hygiene and cleanliness	3:00	03:00	0:00	0:00	06:00
Module 7: Safety and emergency procedures	17:00	07:00	0:00	0:00	24:00
DGT/VSQ/N0101 Employability Skills NOS Version-1.0 NSQF Level-2	30:00	00:00	0:00	0:00	30:00
Module 8: Employability Skills	30:00	00:00	0:00	0:00	30:00
Total Duration	120:00	150:00	0:00	0:00	270:00

Module Details

Module 1: Introduction to the role of an Agriculture Warehouse Worker

Bridge Module, Mapped to AGR/N7505 v3.0

Terminal Outcomes:

- Discuss the job role of an Agriculture warehouse worker.

Duration: 05:00	Duration: 0:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> • Describe the size and scope of the agriculture industry and its sub-sectors. • Discuss the role and responsibilities of an Agriculture Warehouse Worker. • Identify various employment opportunities for an Agriculture Warehouse Worker. 	
Classroom Aids	
Training Kit - Trainer Guide, Presentations, Whiteboard, Marker, Projector, Laptop, Video Films	
Tools, Equipment and Other Requirements	
NA	

Module 2: Process of assisting in unloading, sorting, grading and storing the produce

Mapped to AGR/N7505 v3.0

Terminal Outcomes:

- Demonstrate the process of unloading and checking the produce.
- Describe the process of assisting in sampling, sorting and grading the produce.
- Describe the process of storing the produce.

Duration: 15:00	Duration: 40:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> ● Explain the organisational standards on stocking of different types of produce, documentation, and delivery of relevant services. ● Explain the correct and safe use of the relevant equipment for unloading and moving different types of agricultural produce. ● Describe the material handling procedures for different types of agriculture produce ● Describe the appropriate procedures to be followed while unloading and moving different types of agricultural produce to ensure quality and safety. ● Explain the importance of checking the delivered produce to ensure it is in good condition and delivery matches with the purchase order. ● Describe the process of reporting any discrepancies in the delivery or defects in the produce to the supervisor. ● Describe different types of sampling methods employed for varieties of agricultural produce such as grains, fruits, vegetables and flowers. ● Explain the criteria for sorting and grading different types of agricultural produce. ● Explain the importance of segregating agricultural produce into appropriate categories according to its storage requirements. ● Explain the importance of storing the 	<ul style="list-style-type: none"> ● Demonstrate the use of the relevant unloading equipment to unload the agricultural produce received at the warehouse. ● Demonstrate the use of the relevant Personal Protective Equipment (PPE) to ensure personal safety while unloading the produce. ● Show how to weigh or count the produce using the relevant equipment. ● Demonstrate the process of carrying out a sampling of the received lot. ● Demonstrate the process of sorting and grading the agricultural produce on the basis of relevant parameters as per the supervisor's instructions. ● Demonstrate the process of segregating the produce into appropriate categories according to its storage requirements. ● Demonstrate how to clean the storage area and apply the necessary treatment as per the supervisor's instructions to remove pests and diseases. ● Demonstrate the process of carrying the produce to the designated storage area using the relevant equipment. ● Demonstrate the process of using appropriate storage accessories such as crates, pallets, trays to store the produce, as suitable to the produce. ● Demonstrate the process of maintaining the manual and/ or electronic record of the produce received, unloaded and stored in the

<p>agricultural produce at the recommended temperature and humidity.</p> <ul style="list-style-type: none"> Describe various modern warehousing practices and methods. 	<p>warehouse as per the supervisor's instruction.</p>
<p>Classroom Aids</p>	
<p>Training Kit (Trainer Guide, Presentations). Whiteboard, Marker, Projector, Laptop</p>	
<p>Tools, Equipment and Other Requirements</p>	
<p>Weighing Machine, Gunny Bags, Carton Box, Trays, etc.</p>	

Module 3: Process of assisting in inventory management, organising and maintaining the stock

Mapped to ARG/N7507 v3.0

Terminal Outcomes:

- Describe the process of assisting in inventory management.
- Demonstrate the process of assisting in organising the stock.
- Describe the process of assisting in maintaining the quality of stock.

Duration: 20:00	Duration: 40:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> • Describe the Last-In, First-Out (LIFO) or First-In, First-Out (FIFO) methods of managing stock. • Explain how to organise the stock in the storage area to ensure maximum utilisation of the available space. • Describe the process of labelling and marking the stock for efficient identification and retrieval from the warehouse. • Explain how to deal with the stock of deteriorating agricultural produce. • Explain the importance and process of regulating the temperature in the warehouse to maintain the quality of produce. • Explain the different types of controlled conditions required for storing different types of agricultural produce such as temperature, humidity, ventilation, etc. • Explain the appropriate measures to be followed to protect the produce stored in the warehouse from pests, rodents and disease. • Explain the importance of checking the condition of produce stored in the warehouse regularly. 	<ul style="list-style-type: none"> • Demonstrate the process of maintaining the manual and/ or electronic record of inventory in the warehouse, including the incoming and outgoing produce. • Show how to track the inventory using the appropriate system as per the supervisor's instructions. • Demonstrate how to manage the stock according to the Last-In, First-Out (LIFO) or First-In, First-Out (FIFO) method as per the supervisor's instructions. • Demonstrate the use of the appropriate tools, equipment and accessories for safe and efficient movement and storage of different types of produce. • Show how to label and mark the stock for efficient identification and retrieval in the warehouse. • Show how to regulate the temperature in the warehouse as per the supervisor's instructions to maintain the quality of produce. • Demonstrate the process of applying sheet or cloth cover on the produce to protect it, as per the requirement and type of produce. • Demonstrate the process of removing and disposing the damaged or deteriorating agricultural produce as per the supervisor's instructions.
Classroom Aids	
Training Kit (Trainer Guide, Presentations). Whiteboard, Marker, Projector, Laptop	
Tools, Equipment and Other Requirements	
Fork Lift, Conveyors, Storage Racks, and Bins Pallets	

Module 4: Process of assisting in preparing and loading the produce for transportation

Mapped to AGR/N7508 v3.0

Terminal Outcomes:

- Demonstrate the process of preparing the produce for transportation.
- Demonstrate the process of assisting in loading the produce.

Duration: 20:00	Duration: 40:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> ● Explain the applicable practices for efficient retrieval of produce from the warehouse. ● List the appropriate packing material for varieties of agricultural produce. ● Explain the recommended handling practices to be followed to ensure no damage to the produce and packing material. 	<ul style="list-style-type: none"> ● Demonstrate the process of packing the produce in appropriate packaging such as gunny bags, corrugated boxes, pallets, containers, etc. ● Demonstrate the process of labelling the packed produce with the required information as instructed by the supervisor. ● Demonstrate how to clean and pre-cool the transport vehicle as per the supervisor's instruction, before the loading of produce. ● Demonstrate the process of carrying the produce to the transport vehicle using appropriate equipment such as forklifts, conveyor belts, rail cars, high stackers, etc. ● Show how to load the packed produce in the transport vehicle safely and stack it appropriately to ensure no damage during transit.
Classroom Aids	
Training Kit (Trainer Guide, Presentations). Whiteboard, Marker, Projector, Laptop	
Tools, Equipment and Other Requirements	
Weighing Machine, Packaging Machine, Sealing Machine, Labels, Marker, Fork Lift etc.	

Module 5: Process of assisting in maintenance and documentation activities

Mapped to NOS AGR/N7509 v3.0

Terminal Outcomes:

- Demonstrate the process of maintaining the warehouse and transport vehicle.
- Demonstrate the process of assisting in the documentation.

Duration: 10:00	Duration: 20:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> • Describe the process of carrying out minor repair and maintenance of various tools and equipment. • Describe the process of coordinating with the expert for the complex repair and maintenance needs of any malfunctioning equipment. • Explain the importance of scrubbing the warehouse floor to ensure it is not slippery. • Explain how to handle and store the inflammable items • Explain the recommended treatment to be applied in the warehouse to prevent pest and disease outbreaks. • Explain the importance of ensuring that there is no waterlogging in the warehouse. • Explain the importance of removing any obstructions in the warehouse to ensure free movement and prevent any accidents. • Explain the process of segregating the waste into appropriate categories and optimising resource utilization. 	<ul style="list-style-type: none"> • Demonstrate how to clean the shelves, racks, pallets, loading/unloading area, transport vehicle and the warehouse. • Demonstrate the process of carrying out minor repair and maintenance of Heating, Ventilation and Air-conditioning (HVAC) equipment, refrigeration unit and other tools and equipment as per the supervisor's instructions. • Show how to scrub the warehouse floor to ensure it is not slippery. • Demonstrate the process of applying the recommended treatment as per the supervisor's instructions to prevent pest and disease outbreaks in the warehouse. • Demonstrate the process of treat the used water using chlorine or other recommended treatment. • Demonstrate the process of preparing various documents such as dispatch orders, storage receipts, etc as per the supervisor's instruction. • Demonstrate the process of maintaining various records such as records relating to loading and dispatch of produce, the record of damage to the produce etc as per the supervisor's instructions.
Classroom Aids:	
Training Kit (Trainer Guide, Presentations). Whiteboard, Marker, Projector, Laptop	
Tools, Equipment and Other Requirements	
Disinfectant, Fumigants, Chemicals, Spraying Equipment	

Module 6: Hygiene and cleanliness

Mapped to NOS AGR/N9903 v4.0

Terminal Outcomes:

- Discuss how to adhere to personal hygiene practices.
- Demonstrate ways to ensure cleanliness around the workplace.

Duration: 03:00	Duration: 03:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> • Explain the requirements of personal health, hygiene and fitness at work. • Describe common health-related guidelines laid down by the organizations/ Government at the workplace. • Explain the importance of good housekeeping at the workplace. • Explain the importance of informing the designated authority on personal health issues related to injuries and infectious diseases. 	<ul style="list-style-type: none"> • Demonstrate personal hygiene practices to be followed at the workplace. • Demonstrate the correct way of washing hands using soap and water, and alcohol-based hand rubs. • Demonstrate the steps to follow to put on and take off a mask safely. • Show how to sanitize and disinfect one's work area regularly. • Demonstrate adherence to the workplace sanitization norms. • Show how to ensure the cleanliness of the work area.
Classroom Aids:	
Computer, Projection Equipment, PowerPoint Presentation and Software, Facilitator's Guide, Participant's Handbook.	
Tools, Equipment and Other Requirements	
Personal Protective Equipment, Cleaning Equipment and Materials, Sanitizer, Soap, Mask	

Module 7: Safety and emergency procedures

Mapped to NOS AGR/N9903 v4.0

Terminal Outcomes:

- Describe how to adhere to safety guidelines.
- Show how to administer appropriate emergency procedures.

Duration: 17:00	Duration: 07:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> • List the PPE required at the workplace. • Describe the commonly reported hazards at the workplace. • Describe the hazards caused due to chemicals/pesticides/fumigants. • Describe the basic safety checks to be done before the operation of any equipment/machinery. • Describe the common first aid procedures to be followed in case of emergencies. • State measures that can be taken to prevent accidents and damage s at the workplace. • Explain the importance of reporting details of first aid administered, to the reporting officer/doctor, in accordance with workplace procedures. • State common health and safety guidelines to be followed at the workplace. 	<ul style="list-style-type: none"> • Check various areas of the workplace for leakages, water-logging, pests, fire, etc. • Demonstrate how to safely use the PPE and implements as applicable to the workplace. • Display the correct way of donning, doffing and discarding PPE such as face masks, hand gloves, face shields, PPE suits, etc. • Sanitize the tools, equipment and machinery properly. • Demonstrate the safe disposal of waste. • Demonstrate procedures for dealing with accidents, fires and emergencies. • Demonstrate emergency procedures to the given workplace requirements. • Demonstrate the use of emergency equipment in accordance with manufacturers' specifications and workplace requirements. • Demonstrate the administration of first aid. • Prepare a list of relevant hotline/ emergency numbers.
Classroom Aids:	
Computer, Projection Equipment, PowerPoint Presentation and software, Facilitator's Guide, Participant's Handbook.	
Tools, Equipment and Other Requirements	
Personal Protective Equipment, First Aid Kit, Equipment used in Medical Emergencies.	

Module 8: Employability Skills (30 hours)

Mapped to NOS DGT/VSQ/N0101 v1.0

Duration: 30:00

Key Learning Outcomes

Introduction to Employability Skills Duration: 1 Hour

After completing this programme, participants will be able to:

1. Discuss the importance of Employability Skills in meeting the job requirements

Constitutional values - Citizenship Duration: 1 Hour

2. Explain constitutional values, civic rights, duties, citizenship, responsibility towards society etc. that are required to be followed to become a responsible citizen.
3. Show how to practice different environmentally sustainable practices

Becoming a Professional in the 21st Century Duration: 1 Hours

4. Discuss 21st century skills.
5. Display positive attitude, self -motivation, problem solving, time management skills and continuous learning mindset in different situations.

Basic English Skills Duration: 2 Hours

6. Use appropriate basic English sentences/phrases while speaking

Communication Skills Duration: 4 Hour

7. Demonstrate how to communicate in a well -mannered way with others.
8. Demonstrate working with others in a team

Diversity & Inclusion Duration: 1 Hour

9. Show how to conduct oneself appropriately with all genders and PwD
10. Discuss the significance of reporting sexual harassment issues in time

Financial and Legal Literacy Duration: 4 Hours

11. Discuss the significance of using financial products and services safely and securely.
12. Explain the importance of managing expenses, income, and savings.
13. Explain the significance of approaching the concerned authorities in time for any exploitation as per legal rights and laws

Essential Digital Skills Duration: 3 Hours

14. Show how to operate digital devices and use the associated applications and features, safely and securely
15. Discuss the significance of using internet for browsing, accessing social media platforms, safely and securely

Entrepreneurship Duration: 7 Hours

16. Discuss the need for identifying opportunities for potential business, sources for arranging money and potential legal and financial challenges

Customer Service Duration: 4 Hours

17. Differentiate between types of customers
18. Explain the significance of identifying customer needs and addressing them
19. Discuss the significance of maintaining hygiene and dressing appropriately

Getting ready for apprenticeship & Jobs Duration: 2 Hours

20. Create a biodata
21. Use various sources to search and apply for jobs
22. Discuss the significance of dressing up neatly and maintaining hygiene for an interview
23. Discuss how to search and register for apprenticeship opportunities

Annexure

Trainer Prerequisites						
Minimum Educational Qualification	Specialization	Relevant Industry Experience		Training Experience		Remarks
		Years	Specialization	Years	Specialization	
12 th Class		4	Post-Harvest Supply Chain Management	0		Ex-Service-Man including Ex-Paramilitary personnel: Minimum Qualification is 10+2 with an Honourable Discharge/ Pension. SSC would consider a relaxation/waiver of sector-specific experience on case-to-case basis.
Diploma	Agriculture	3	Post-Harvest Supply Chain Management	0		
Graduate	Graduate in any stream except Agriculture/ Horticulture/ Forestry/BBA	3	Post-Harvest Supply Chain Management	0		For the school Program minimum qualification of the Trainer should be Graduate (Agriculture/ Horticulture/ Forestry/BBA) with minimum 3 years Teaching experience (will be considered industry experience)
BBA		2	Post-Harvest Supply Chain Management			
Graduate	Agriculture/ Horticulture/ Forestry	2	Post-Harvest Supply Chain Management	0		
Post-Graduate	Supply Chain management/ Agri-business Management/ Marketing /Agri-business management	0				

Trainer Requirements

Trainer Certification	
Domain Certification	Platform Certification
Certified for Job Role “Agriculture Warehouse Worker”, mapped to QP: “AGR/Q7502, v3.0”, 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”. The minimum accepted score as per MEPSC guidelines is 80%.

Assessor Requirements

Assessor Prerequisites						
Minimum Educational Qualification	Specialization	Relevant Industry Experience		Training/Assessment Experience		Remarks
		Years	Specialization	Years	Specialization	
B.Sc.	Agriculture/ Supply Chain/ Agri Business/ Agri finance and related experiences	5	Agriculture/ Post Harvest Management/ Supply Chain/ Logistics/ Agri-Business and Marketing related experience	0		Practical skills and knowledge required in Agri warehouse operations
Post-Graduation	Agri Business/ Agri warehousing/ Agri Marketing/ Agri Finance/ Logistics/ SCM and related experiences	2	Agriculture/ Post Harvest Management/ Supply Chain/ Logistics/ Agri-Business and Marketing related experience	0		Practical skills and knowledge required in Agri warehouse operations
PhD	Agriculture Marketing/ Supply Chain/ Agri Business/ Agri finance and related experiences	1	Agriculture/ Post Harvest Management/ Supply Chain/ Logistics/ Agri-Business and Marketing related experience	0		Practical skills and knowledge required in Agri warehouse operations
Assessor Certification						
Domain Certification			Platform Certification			
Certified for Job Role “Agriculture Warehouse Worker”, mapped to QP: “AGR/Q7502, v3.0”, Minimum accepted score is 80%			Certified for the Job Role: “Assessor (Vet and Skills)”, mapped to the Qualification Pack: “MEP/Q2701, v2.0”, with a minimum score of 80%.			

Assessment Strategy

Assessment System Overview

In Agriculture Sector it is of ultimate importance that individuals dealing with crop production or livestock have the requisite knowledge and competencies to undertake the task. Based on the Assessment Criteria, SSC in association with empaneled AAs, define the test structure for the given job roles to cover the required skills and competencies. Assessment strategy consists of the following:

1. Multiple Choice Questions: To assess basic knowledge (Objective/Subjective)
2. Viva: To assess awareness on processes (Oral and/or written questioning)
3. Practical: To evaluate skills and identify competencies. (Observation)

Assessments for knowledge and awareness on processes may be conducted through 'real-time' internet-based evaluation or by conducting the same 'offline' through TABs. Skills and competencies are to be assessed by conducting 'practical' on the ground through qualified and ToA certified assessors.

An individual must have adequate knowledge and skills to perform a specific task, weightage for different aspects of the assessment is given as follows:

- Multiple Choice Questions: 20%-30%, depending on the specific QP
- Viva: 20%
- Practical: 50% - 60% (Involves demonstrations of applications and presentations of procedures/tasks and other components)
- Assessment will be carried out by certified assessors through empaneled assessment partners. Based on the results of the assessment; ASCI will certify the learners/candidates

Testing Environment

Assessments are conducted on laptops, Mobiles and android tablets via both offline and online mode depending on the internet connectivity at the assessment location.

In remote locations/villages, assessments get delivered through tablets without the requirement of the Internet.

- Multilingual assessments (ASCI is conducting the assessments in 13 + languages pan India)
- Rubric driven assessments in Practical/Viva sections and responses recorded accordingly
- All responses, data, records and feedback are stored digitally on the cloud
- Advanced auto-proctoring features – photographs, time-stamp, geographic-tagging, toggle- screen/copy-paste disabled, etc.
- Android-based monitoring system
- End to end process from allocation of a batch to final result upload, there is no manual intervention

- Assessment will normally be fixed for a day after the end date of the training / within 7 days of completion of training.
- Assessment will be conducted at the training venue
- The room where assessment is conducted will be set with proper seating arrangements with enough space to curb copying or other unethical activities
- Question bank of theory and practice will be prepared by ASCI /assessment agency and approved ASCI. Only from approved Question Bank assessment agency will prepare the question paper. Theory testing will include multiple-choice questions, pictorial questions, etc. which will test the trainee on his theoretical knowledge of the subject.
- The theory, practical and viva assessments will be carried out on the same day. In case of a greater number of candidates, the number of assessors and venue facilitation be increased and facilitated

Assessment			
Assessment Type	Formative or Summative	Strategies	Examples
Theory	Summative	MCQ/Written exam	Knowledge of facts related to the job role and functions. Understanding of principles and concepts related to the job role and functions
Practical	Summative	Structured tasks/Demonstration	Practical application /Demonstration /Application tasks
Viva	Summative	Questioning and Probing	Mock interviews on the usability of job roles/advantages /importance of adherence to procedures. Viva will be used to gauge trainee's confidence and correct knowledge in handling the job situation

The question paper is pre-loaded in the computer /Tablet and it will be in the language as requested by the training partner.

Assessment Quality Assurance framework

Assessment Framework and Design:

Based on the Assessment Criteria, SSC in association with AAs will define the test structure for the given roles to cover the required skills and competencies. ASCI offer a bouquet of tools for multi-dimensional evaluation of candidates covering language, cognitive skills, behavioural traits and domain knowledge.

Theoretical Knowledge - Item constructs and types are determined by a theoretical understanding of the testing objectives and published research about the item types and constructs that have shown statistical validity towards measuring the construct. Test item types that have been reported to be coachable are not included. Based on these, items are developed by domain experts. They are provided with comprehensive guidelines of the testing objectives of each question and other quality measures.

Type – Questions based on Knowledge Required, Case-based practical scenario questions and automated simulation-based questions.

Practical Skills - The practical assessments are developed taking into consideration two aspects: what practical tasks is the candidate expected to perform on the job and what aspects of the job cannot be judged through theoretical assessments. The candidates shall be asked to perform either an entire task or a set of subtasks depending on the nature of the job role

Type – Standardized rubrics for evaluation against a set of tasks in a demo/practical task

Viva Voce - Those practical tasks which cannot be performed due to time or resource constraints are evaluated through the viva mode. Practical tasks are backed up with Viva for thorough assessment and complete evaluation

Type – Procedural questions, dos and don'ts, subjective questions to check the understanding of practical tasks.

The assessor has to go through an orientation program organized by the Assessment Agency. The training would give an overview to the assessors on the overall framework of QP evaluation. The assessor shall be given a NOS and PC level overview of each QP as applicable. The overall structure of assessment and objectivity of the marking scheme will be explained to them. The giving of marks will be driven by an objective framework that will maintain the standardization of the marking scheme.

Type of Evidence and Evidence Gathering Protocol:

During the assessment the evidence collected by AAs and ASCI are:

- GeoTagging to track ongoing assessment
- AA's coordinator emails the list of documents and evidence (photos and videos) to the assessor one day before the assessment. The list is mentioned below:
 - Signed Attendance sheet
 - Assessor feedback sheet

- Candidate feedback sheet
 - Assessment checklist for assessor
 - Candidate Aadhar/ID card verification
 - Pictures of the classroom, labs to check the availability of adequate equipment's and tools to conduct the training and assessment
 - Pictures and videos of Assessment, training feedback and infrastructure.
- Apart from the Assessor, a Technical assistant is popularly known as Proctor also ensures the proper documentation and they verify each other's tasks.
 - To validate their work on the day of the assessment, regular calls and video calls are done.
 - On-boarding and training of the assessor and proctor are done on a timely basis to ensure that the quality of the assessment should be maintained.
 - Training covers the understanding of QP, NSQF level, NOS and assessment structure

Methods of Validation

- Morning Check (Pre-Assessment): Backend team of AA calls and confirms assessor/technical SPOC event status. Assessor/Technical SPOC are instructed to reach the centre on time by 9:30 AM / as decided with TC and delay should be highlighted to the Training Partner in advance.
- Video Calls: Random video calls are made to the technical SPOC/assessor so as to keep a check on assessment quality and ensure assessment is carried out in a fair and transparent manner
- Aadhar verification of candidates
- Evening Check (Post Assessment): Calls are made to the ground team to ensure the event is over by what time and the documentation is done properly or not.
- TP Calling: To keep a check on malpractices, an independent audit team calls the TP on a recorded line to take confirmation if there was any malpractice activity observed in the assessment on part of the AA/SSC team. If calls are not connected, an email is sent to TP SPOC for taking their confirmation
- Video and Picture Evidence: Backend team collects video and pictures for assessment on a real-time basis and highlights any issue such as students sitting idle/ trainer helping the candidates during the assessment.
- Surprise Visit: Time to time SSC/AA Audit team can visit the assessment location and conduct a surprise audit for the assessment carried out by the ground team.
- Geo Tagging: On the day of the assessment, each technical SPOC is required to login into our internal app which is Geotagged. Any deviation with the centre address needs to be highlighted to the assessment team on a real-time basis.

Method for assessment documentation, archiving, and Access:

- ASCI have a fully automated result generation process in association with multiple AAs
- Theory, Practical and Viva marks form the basis of the results and encrypted files

generated to avoid data manipulation. All responses were captured and stored in the System with Time-Stamps at the end of AAs and SSC. NOS-wise and PC-wise scores can be generated.

- Maker Checker concept: One person prepares the results and another audit result which is internally approved by AA at first and then gets vetted at the end of SSC
- All softcopies of documents are received from the on-ground tech team over email. The same is downloaded by our internal backend team and saved in Repository. The repository consists of scheme-wise folders. These scheme-wise folders have two job role-specific folders. These specific folders have Year wise and Month wise folders where all documents are saved in Batch specific folders. All Hard copies are filed and stored in the storeroom.

Result Review & Recheck Mechanism –

- Time-stamped assessment logs
- Answer/Endorsement sheets for each candidate
- Attendance Sheet
- Feedback Forms: Assessor feedback form, Candidate feedback form, TP feedback form
- The results for each of the candidates shall be stored and available for review (retained for 5 years/ till the conclusion of the project or scheme)

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	The 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	The 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
AGR	Agriculture
FIFO	First-In, First-Out
HVAC	Heating, Ventilation and Air-conditioning
NOS	National Occupational Standard (s)
LIFO	Last-In, First-Out
NSQF	National Skills Qualifications Framework
OJT	On-the-job Training
PwD	People with Disability
PPE	Personal Protective Equipment
QP	Qualifications Pack