



Model Curriculum

QP Name: Produce Mapping Surveyor

QP Code: AGR/Q7907

Version: 2.0

NSQF Level: 5

Model Curriculum Version: 1.0

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

Table of Contents

Contents

Training Parameters.....	3
Program Overview	4
Training Outcomes.....	4
Compulsory Modules	4
Module 1: Introduction to the role of a Produce Mapping Surveyor	6
Module 2: Process of carrying out produce mapping	7
Module 3: Process of supervising the establishment of crops	8
Module 4: Process of identifying and treating plant pests, diseases, weeds and soil fertility issues ...	10
Module 5: Process of developing and implementing sustainable farming strategies.....	12
Module 6: Process of maintaining records concerning commodity management.....	13
Module 7: Health and safety at work	14
Module 8: Employability Skills	15
Module 9: On-the-Job Training	17
Annexure.....	18
Trainer Requirements	18
Assessor Requirements.....	19
Assessment Strategy.....	21
References	26
Glossary.....	26
Acronyms and Abbreviations	27

Training Parameters

Sector	Agriculture
Sub-Sector	Agriculture Industries
Occupation	Commodity Management
Country	India
NSQF Level	5
Aligned to NCO/ISCO/ISIC Code	NCO-2015/1324
Minimum Educational Qualification and Experience	<p>Completed 2nd year of UG OR Pursuing 2nd year of UG and continuous education OR Completed 2nd year of diploma (after 12th) OR Pursuing 2nd year of 2-year diploma after 12th OR Previous relevant qualification of NSQF Level 4 and with minimum education as 8th grade pass with 3 years of relevant experience OR Previous relevant qualification of NSQF Level 4.5 with 1.5 years of relevant experience</p>
Pre-Requisite License or Training	NA
Minimum Job Entry Age	21 Years
Last Reviewed On	29/03/2023
Next Review Date	29/03/2026
NSQC Approval Date	29/03/2023
QP Version	2.0
Model Curriculum Creation Date	29/03/2023
Model Curriculum Valid Up to Date	29/03/2026
Model Curriculum Version	1.0
Minimum Duration of the Course	510 Hours
Maximum Duration of the Course	510 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:

- Describe the process of carrying out produce mapping.
- Elucidate ways to supervise the establishment of crops.
- Explain the process of identifying and treating plant pests, diseases, weeds and soil fertility issues.
- Elucidate ways to develop and implement sustainable farming strategies.
- Describe the process of maintaining records concerning commodity management.
- Demonstrate various practices to ensure health and safety at work.

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/N7920: Carry out produce mapping NOS Version- 2.0 NSQF Level- 5	25:00	35:00	0:00	00:00	60:00
Module 1: Introduction to the role of a Produce Mapping Surveyor	05:00	00:00	0:00	00:00	05:00
Module 2: Process of carrying out produce mapping	20:00	35:00	0:00	00:00	55:00
AGR/N7921: Supervise the establishment of crops NOS Version- 2.0 NSQF Level- 5	15:00	15:00	0:00	00:00	30:00
Module 3: Process of supervising the establishment of crops	15:00	15:00	0:00	00:00	30:00
AGR/N7922: Identify and treat plant pests, diseases, weeds and soil fertility issues NOS Version- 2.0 NSQF Level- 5	30:00	30:00	0:00	00:00	60:00

Module 4: Process of identifying and treating plant pests, diseases, weeds and soil fertility issues	30:00	30:00	0:00	00:00	60:00
AGR/N7923: Develop and implement sustainable farming strategies NOS Version- 2.0 NSQF Level- 5	45:00	15:00	0:00	00:00	60:00
Module 5: Process of developing and implementing sustainable farming strategies	45:00	15:00	0:00	00:00	60:00
AGR/N7904: Maintain records concerning commodity management NOS Version- 2.0 NSQF Level- 6	30:00	30:00	0:00	00:00	60:00
Module 6: Process of maintaining records concerning commodity management	30:00	30:00	0:00	00:00	60:00
AGR/N9911: Ensure adherence to health and safety guidelines at work NOS Version- 2.0 NSQF Level- 6	05:00	25:00	0:00	00:00	30:00
Module 7: Health and Safety at work	05:00	25:00	0:00	00:00	30:00
DGT/VSQ/N0103: Employability Skills NOS Version- 1.0 NSQF Level- 5	90:00	00:00	0:00	00:00	90:00
Module 8: Employability Skills	90:00	00:00	0:00	00:00	90:00
Module 9: On-the Job Training	00:00	00:00	120:00	00:00	120:00
Total Duration	240:00	150:00	120:00	00:00	510:00

Module Details

Module 1: Introduction to the role of a Produce Mapping Surveyor

Bridge Module, Mapped to AGR/N7920 v2.0

Terminal Outcomes:

- Discuss the job role of a Produce Mapping Surveyor

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 a Produce Mapping Surveyor. • Identify various employment opportunities for a Produce Mapping Surveyor. 	
Classroom Aids	
Training Kit - Trainer Guide, Presentations, Whiteboard, Marker, Projector, Laptop, Video Films	
Tools, Equipment and Other Requirements	
NA	

Module 2: Process of carrying out produce mapping

Mapped to AGR/N7920 v2.0

Terminal Outcomes:

- Explain how to determine the demand and supply of relevant commodities.
- Describe the process of preparing the produce map.

Duration: 20:00	Duration: 35:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> ● List the appropriate primary and secondary sources for collecting information for produce mapping. ● Describe the procedure for the preparation of produce mapping. ● Explain how to resolve the common problems experienced while preparing the produce map. ● Explain demand and supply analysis techniques for commodities. 	<ul style="list-style-type: none"> ● Demonstrate how to analyze the demand and supply curve of the selected commodities. ● Show how to collect information about the relevant growers, traders and aggregators, and prepare their database. ● Show how to collect information about the existing crops, production systems, land and other resources. ● Prepare a sample produce map. ● Demonstrate the use of appropriate tools and equipment for produce mapping, e.g. Geographic Information System (GIS).
Classroom Aids	
Training Kit (Trainer Guide, Presentations). Whiteboard, Marker, Projector, Laptop	
Tools, Equipment and Other Requirements	
White Board, Laptops/Computers, Water Bottle, Markers, First Aid Kit, Installed Video camera with high resolution and recording facility, Audio/ Visual Aids, Soil Testing Kit, Office Stationery	

Module 3: Process of supervising the establishment of crops

Mapped to ARG/N7921 v2.0

Terminal Outcomes:

- Explain the process of planning the planting activities.
- Explain the importance of scheduling planting activities and determining responsibilities.
- Describe the process of monitoring the production activities.

Duration: 15:00	Duration: 15:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> ● Describe the process of planning planting activities and the relevant factors to be considered. ● Explain the appropriate measures to be adopted to minimize the detrimental impacts of climate on the crop. ● List the requirement of various resources for planting activities. ● Explain the importance of setting measurable targets and performance indicators based on the production plan. ● Describe the process of scheduling the planting activities based on the relevant factors. ● Explain how to determine the responsibilities of different individuals concerning the preparatory and planting activities. ● Elucidate the importance and process of monitoring the production activities. ● State the recommended environmental protection measures to be followed, e.g. measures to prevent soil degradation. ● Discuss the sound planning and management practices for the agriculture sector. 	<ul style="list-style-type: none"> ● Demonstrate the process of carrying out appropriate documentation concerning the scheduling and identified responsibilities for individuals. ● Demonstrate the use of relevant tools, equipment and machinery. ● Demonstrate the process of carrying out appropriate documentation as per the organizational standards.
Classroom Aids	
Training Kit (Trainer Guide, Presentations). Whiteboard, Marker, Projector, Laptop	
Tools, Equipment and Other Requirements	

White Board, Laptops/Computers, Water Bottle, Markers, First Aid Kit, Installed Video camera with high resolution and recording facility, Audio/ Visual Aids, Soil Testing Kit, Office Stationery

Module 4: Process of identifying and treating plant pests, diseases, weeds and soil fertility issues

Mapped to ARG/N7922 v2.0

Terminal Outcomes:

- Explain the process of identifying and treating pest and disease issues, soil fertility issues and weed issues.

Duration: 30:00	Duration: 30:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> ● Explain the importance of performing regular checks on the crop to identify pest and disease infestation. ● List different types of crop pests and diseases. ● Describe the process of preparing and applying different types of pesticides. ● Explain the importance of using pesticides judiciously to minimize the impact on the environment and consumers. ● Describe the organic methods of preventing and controlling pest and disease infestation, e.g. adoption of natural enemies of crop pests. ● Describe the process of collecting soil samples and the importance of getting them tested from a government-approved soil testing laboratory. ● State the appropriate soil treatment to be applied to improve soil fertility. ● Describe the common types of weeds found in crop fields. ● Describe the appropriate methods for weed control, e.g. cultural, mechanical, biological and chemical weed control. ● Explain the importance of maintaining beneficial weeds in crop fields. ● Explain the importance of maintaining a weed herbarium for the identification and management of weeds. 	<ul style="list-style-type: none"> ● Demonstrate the process of performing regular checks on the crop and identifying the signs of pest and disease infestation. ● Demonstrate the process of preparing pesticides for application as per the manufacturer's instructions, e.g. dilution of liquid pesticides with water. ● Demonstrate the use of appropriate plant protection equipment and PPE during the application of pesticides. ● Prepare sample records concerning the use of pesticides. ● Demonstrate the process of applying appropriate soil treatment, e.g. compost, manure, and inorganic fertilizers, to improve soil fertility.

<ul style="list-style-type: none"> List the relevant documentation requirements. 	
Classroom Aids	
Training Kit (Trainer Guide, Presentations). Whiteboard, Marker, Projector, Laptop	
Tools, Equipment and Other Requirements	
White Board, Laptops/Computers, Water Bottle, Markers, First Aid Kit, Installed Video camera with high resolution and recording facility, Audio/ Visual Aids, Soil Testing Kit, Office stationery	

Module 5: Process of developing and implementing sustainable farming strategies

Mapped to ARG/N7923 v2.0

Terminal Outcomes:

- Elucidate ways to assess the existing farming practices.
- Explain the process of developing sustainability strategies.
- Describe the process of implementing sustainability strategies.

Duration: 45:00	Duration: 15:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> ● Discuss the relevant sustainability issues. ● Elucidate the principles and processes relevant to sustainable farming. ● Explain the benchmarks relevant to organic and sustainable farming. ● Elucidate the importance and process of assessing the existing farming guidelines and practices. ● Describe the process of developing and implementing sustainability strategies. ● Elucidate the benefits and methods of optimizing the usage of resources such as water and electricity. ● Elucidate the criteria and process of segregating waste into appropriate categories. 	<ul style="list-style-type: none"> ● Demonstrate how to update the sustainability strategies as per the stakeholder feedback. ● Demonstrate the process of segregating waste into appropriate categories. ● Demonstrate the process of recycling and disposing different types of waste as per the applicable regulatory requirements.
Classroom Aids	
Training Kit (Trainer Guide, Presentations). Whiteboard, Marker, Projector, Laptop	
Tools, Equipment and Other Requirements	
White Board, Laptops/Computers, Water Bottle, Markers, First Aid Kit, Installed Video camera with high resolution and recording facility, Audio/ Visual Aids, Soil Testing Kit, Office stationery	

Module 6: Process of maintaining records concerning commodity management

Mapped to AGR/N7904 v2.0

Terminal Outcomes:

- Explain the process of maintaining the records.
- Explain the importance of storing the records safely.

Duration: 30:00	Duration: 30:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> • Describe the appropriate procedures for documentation and record keeping. • List the relevant details to be recorded on market trends and patterns. • Describe the appropriate impact analysis method. • Explain the use of relevant Enterprise Resource Planning (ERP) system/information management computer software for effective management of information/data. • Explain the use of relevant computer software for the statistical analysis of data. • State the applicable reporting requirements. • Describe different methods of safely storing organizational records and documents. • Explain the importance of creating data backup and ensuring data access by the authorized personnel only. 	<ul style="list-style-type: none"> • Demonstrate the process of maintaining records concerning the trends, patterns, factors impacting commodity prices and other relevant observations. • Show how to evaluate the records to ensure they are up-to-date, complete and accurate. • Demonstrate the use of the appropriate computer software to maintain electronic records. • Show how to conduct the review of the records as per the organizational policies. • Demonstrate the process of maintaining the electronic backup of the critical records to protect against accidental damage or loss of physical documents.
Classroom Aids	
Training Kit (Trainer Guide, Presentations). Whiteboard, Marker, Projector, Laptop	
Tools, Equipment and Other Requirements	
White Board, Laptops/Computers, Water Bottle, Markers, First Aid Kit, Installed Video camera with high resolution and recording facility, Audio/ Visual Aids, Soil Testing Kit, Office stationery	

Module 7: Health and safety at work

Mapped to NOS AGR/N9911 v2.0

Terminal Outcomes:

- Demonstrate various practices to be followed to ensure health and safety at work.
- Describe different ways to deal with emergencies at work.

Duration: 05:00	Duration: 25:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> • Explain the importance of following health and safety procedures at work such as using Personal Protective Equipment (PPE). • Explain the importance of ensuring the PPE, emergency equipment and first-aid kit are usable and updated. • Explain the importance of sanitising the workplace, tools and equipment. • Explain the importance of ensuring only authorised personnel have access to hazardous work areas • Describe the process to be followed in case of emergencies such as fire, accidents, disease outbreaks or natural calamities. • Explain how to identify health and safety hazards at work and take appropriate preventive measures. • Describe the process of reporting workplace emergencies and accidents to the relevant authority in compliance with the organisational and regulatory requirements. 	<ul style="list-style-type: none"> • Demonstrate the use of appropriate PPE. • Show how to sanitise the workplace along with the relevant tools and equipment. • Demonstrate safe handling of hazardous materials such as chemicals and flammable objects. • Show how to administer first aid to an injured person. • Demonstrate appropriate actions to take to deal with fire, accidents and emergencies. • Demonstrate the use of emergency equipment in accordance with the manufacturer's instructions.
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, Sanitiser, Soap, Mask	

Module 8: Employability Skills

Mapped to NOS DGT/VSQ/N0103 v1.0

Duration: 90:00

Key Learning Outcomes

Introduction to Employability Skills Duration: 3 Hours

After completing this programme, participants will be able to:

1. Outline the importance of Employability Skills for the current job market and future of work
2. List different learning and employability related GOI and private portals and their usage
3. Research and prepare a note on different industries, trends, required skills and the available opportunities

Constitutional values – Citizenship Duration: 1.5 Hours

4. 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
5. Demonstrate how to practice different environmentally sustainable practices

Becoming a Professional in the 21st Century Duration: 5 Hours

6. Discuss relevant 21st century skills required for employment
7. Highlight the importance of practicing 21st century skills like Self-Awareness, Behavior 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
8. Create a pathway for adopting a continuous learning mindset for personal and professional development

Basic English Skills Duration: 10 Hours

9. Show how to use basic English sentences for everyday conversation in different contexts, in person and over the telephone
10. Read and understand text written in basic English
11. Write a short note/paragraph / letter/e -mail using correct basic English

Career Development & Goal Setting Duration: 4 Hours

12. Create a career development plan
13. Identify well-defined short- and long-term goals

Communication Skills Duration: 10 Hours

14. Demonstrate how to communicate effectively using verbal and nonverbal communication etiquette
15. Write a brief note/paragraph on a familiar topic
16. Explain the importance of communication etiquette including active listening for effective communication
17. Role play a situation on how to work collaboratively with others in a team

Diversity and Inclusion Duration: 2.5 Hours

18. Demonstrate how to behave, communicate, and conduct appropriately with all genders and PwD
19. Discuss the significance of escalating sexual harassment issues as per POSH act

Financial and Legal Literacy Duration: 10 Hours

20. Discuss various financial institutions, products, and services

21. Demonstrate how to conduct offline and online financial transactions, safely and securely and check passbook/statement
22. Explain the common components of salary such as Basic, PF, Allowances (HRA, TA, DA, etc.), tax deductions
23. Calculate income and expenditure for budgeting
24. Discuss the legal rights, laws, and aids

Essential Digital Skills Duration: 20 Hours

25. Describe the role of digital technology in day-to-day life and the workplace
26. Demonstrate how to operate digital devices and use the associated applications and features, safely and securely
27. Demonstrate how to connect devices securely to internet using different means
28. Follow the dos and don'ts of cyber security to protect against cyber crimes
29. Discuss the significance of displaying responsible online behavior while using various social media platforms
30. Create an e-mail id and follow e-mail etiquette to exchange e-mails
31. Show how to create documents, spreadsheets and presentations using appropriate applications
32. utilize virtual collaboration tools to work effectively

Entrepreneurship Duration: 7 Hours

33. Explain the types of entrepreneurship and enterprises
34. Discuss how to identify opportunities for potential business, sources of funding and associated financial and legal risks with its mitigation plan
35. Describe the 4Ps of Marketing-Product, Price, Place and Promotion and apply them as per requirement
36. Create a sample business plan, for the selected business opportunity

Customer Service Duration: 9 Hours

37. Classify different types of customers
38. Demonstrate how to identify customer needs and respond to them in a professional manner
39. Discuss various tools used to collect customer feedback
40. Discuss the significance of maintaining hygiene and dressing appropriately

Getting ready for apprenticeship & Jobs Duration: 8 Hours

41. Draft a professional Curriculum Vitae (CV)
42. Use various offline and online job search sources to find and apply for jobs
43. Discuss the significance of maintaining hygiene and dressing appropriately for an interview
44. Role play a mock interview
45. List the steps for searching and registering for apprenticeship opportunities

Module 9: On-the-Job Training

Mapped to Produce Mapping Surveyor

Mandatory Duration: 120:00	Recommended Duration: 00:00
Location: On-Site	
<p>Terminal Outcomes</p> <ul style="list-style-type: none"> ● Describe the procedure for the preparation of produce mapping. ● Use appropriate tools and equipment for produce mapping, e.g. Geographic Information System (GIS). ● Carry out appropriate documentation concerning the scheduling and identified responsibilities for individuals. ● Perform regular checks on the crop and identifying the signs of pest and disease infestation. ● Apply appropriate soil treatment, e.g. compost, manure, and inorganic fertilizers, to improve soil fertility. ● Develop and implement sustainability strategies. ● Evaluate the records to ensure they are up-to-date, complete and accurate. ● Use emergency equipment in accordance with the manufacturer's instructions. 	

Annexure

Trainer Requirements

Trainer Prerequisites						
Minimum Educational Qualification	Specialization	Relevant Industry Experience		Training Experience		Remarks
		Years	Specialization	Years	Specialization	
Graduate	Graduate (Agriculture/ Horticulture)	2	Agri Commodity Management	0		
Post Graduate	Post Graduate (Agriculture/Horticulture)	0.5	Agri Commodity Management	0		

Trainer Certification	
Domain Certification	Platform Certification
Certified for Job Role “ Produce Mapping Surveyor ”, mapped to QP: “AGR/Q7907, v2.0”, Minimum accepted score is 80%	Recommended that the Trainer is certified for the Job Role: “Trainer (Vet and Skills)”, mapped to the Qualification Pack: “MEP/Q2601, v2.0”. 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	
Graduation	Bsc (Agriculture/Horticulture)	5	Agri commodity research or analyst/ Agriculture research or other related experience	0		Practical skills and knowledge required in produce (commodity) mapping activities and techniques
Graduation	BSc/BBA (Bachelor of Business Administration) in Logistics and Supply Chain Management, Accounting or Agri Finance or equivalent Bachelor degree	5	Agri commodity research or analyst/ Agriculture research or other related experience	0		Practical skills and knowledge required in produce (commodity) mapping activities and techniques
Post-Graduation	MBA in Financial Management/Agri Finance, Procurement and Contract Management, Accounting, Material Management, Inventory Management, Logistics and Supply Chain Management OR Post Graduate Diploma /MBA- Agribusiness Management OR Master of Agribusiness Management or other equivalent degrees.	2	Agri commodity research or analyst/ Agriculture research or other related experience	0		Practical skills and knowledge required in produce (commodity) mapping activities and techniques

PhD	Doctoral (Financial management/ Agri Finance, Procurement and Contract Management, Accounting, Material Management, Inventory Management, Logistics and Supply Chain management/ Agri Business)	1	Agri commodity research or analyst/ Agriculture research or other related experience	0		Practical skills and knowledge required in produce (commodity) mapping activities and techniques
PhD	PhD (Agriculture/ Horticulture/ Agri-Business and related streams)	1	Agri commodity research or analyst/ Agriculture research or other related experience	0		Practical skills and knowledge required in produce (commodity) mapping activities and techniques

Assessor Certification	
Domain Certification	Platform Certification
Certified for Job Role “ Produce Mapping Surveyor ”, mapped to QP: “AGR/Q7907, v2.0”, 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 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 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 tool 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 assessor and proctor is 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 candidate 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	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
AGR	Agriculture
NOS	National Occupational Standard (s)
NSQF	National Skills Qualifications Framework
OJT	On-the-job Training
QP	Qualifications Pack
PwD	People with Disability
PPE	Personal Protective Equipment