







Model Curriculum

QP Name: Seed Processing Plant Technician

QP Code: AGR/Q7104

Version: 3.0

NSQF Level: 4

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







Table of Contents

Training Parameters	3
Program Overview	5
Training Outcomes	5
Compulsory Modules	5
Module 1: Introduction to the role of a Seed Processing Plant Technician	7
Module 2: Preparation of work area and machineries for seed processing	8
Module 3: Operation of the seed processing machineries	9
Module 4: Process of packing, weighing and storing the seeds	10
Module 5: Maintenance of seed processing data	11
Module 6: Hygiene and cleanliness	12
Module 7: Safety and emergency procedures	13
Module 8: Employability Skills (60 hours)	14
Annexure	16
Trainer Requirements	16
Assessor Requirements	17
Assessment Strategy	18
References	23
Glossary	23
Acronyms and Abbreviations	24







Training Parameters

Sector	Agriculture and Allied
Sub-Sector	Agriculture Industries
Occupation	Seed Production and Processing
Country	India
NSQF Level	4
Aligned to NCO/ISCO/ISIC Code	NCO-2015/NIL
Minimum Educational Qualification and Experience	Minimum Educational Qualification: 12th grade pass OR Completed 2nd year of 3-year diploma (after 10th) and pursuing regular diploma OR 10th grade pass plus 2-year NTC OR 10th grade pass plus 1-year NTC plus 1 year NAC OR 8th pass plus 2-year NTC plus 1-Year NAC plus CITS OR 10th grade pass and pursuing continuous schooling OR 10th Grade Pass with 2-year relevant experience OR Previous relevant Qualification of NSQF Level 3.0 with minimum education as 8th Grade pass with 3- year relevant experience OR Previous relevant Qualification of NSQF Level 3.5 with 1.5- year relevant experience
Pre-Requisite License or Training	NA
Minimum Job Entry Age	18 Years
Last Reviewed On	30/12/2021
Next Review Date	30/12/2024
NSQC Approval Date	30/12/2021
QP Version	3.0
Model Curriculum Creation Date	







Model Curriculum Valid Up to Date	30/12/2024
Model Curriculum Version	2.0
Minimum Duration of the Course	390 Hours
Maximum Duration of the Course	390 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 preparing the work area and machineries for seed processing.
- Demonstrate the process of setting up and operating different types of seed processing machineries.
- Demonstrate the process of weighing, packing and storing the seeds.
- Demonstrate the process of recording and maintaining the seed processing data.
- Explain the importance of practising inclusion and gender equality at work.
- Demonstrate various practices to maintain personal hygiene, cleanliness, 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
Bridge Module	05:00	00:00	0:00	0:00	05:00
Module 1: Introduction to the role of a Seed Processing Plant Technician	05:00	0:00	0:00	0:00	05:00
AGR/N7115 Prepare the work area and machineries for seed processing NOS Version- 2.0 NSQF Level- 4	20:00	35:00	0:00	0:00	55:00
Module 2: Preparation of work area and machineries for seed processing	20:00	35:00	0:00	0:00	55:00
AGR/N7117 Operate the seed processing machineries to process the seed NOS Version- 2.0 NSQF Level- 4	30:00	60:00	0:00	0:00	90:00
Module 3: Operation of the seed processing machineries	30:00	60:00	0:00	0:00	90:00
AGR/N7122 Pack, weigh and store the seed	30:00	60:00	0:00	0:00	90:00







NOS Version- 1.0 NSQF Level- 4					
Module 4: Process of packing, weighing and storing the seeds	30:00	60:00	0:00	0:00	90:00
AGR/N7118 Record and maintain the seed processing data NOS Version- 2.0 NSQF Level- 4	15:00	15:00	0:00	0:00	30:00
Module 5: Maintenance of seed processing data	15:00	15:00	0:00	0:00	30:00
AGR/N9903 Maintain health and safety at the workplace NOS Version- 3.0 NSQF Level- 4	20:00	10:00	0:00	0:00	30:00
Module 6: Hygiene and cleanliness	3:00	3:00	0:00	0:00	6:00
Module 7: Safety and emergency procedures	17:00	07:00	0:00	0:00	24:00
DGT/VSQ/N0102 Employability Skills NOS Version-1.0 NSQF Level-4	60:00	00:00	0:00	0:00	60:00
Module 8: Employability Skills	60:00	00:00	0:00	0:00	60:00
Total Duration	180:00	180:00	0:00	0:00	360:00

OJT: 30 hours







Module Details

Module 1: Introduction to the role of a Seed Processing Plant Technician Bridge Module

Terminal Outcomes:

• Discuss the role of a Seed Processing Plant Technician.

Duration: 05:00	Duration: 0:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
 Describe the size and scope of the agriculture industry and its sub- sectors. 	
 Discuss the role and responsibilities of a Seed Processing Plant Technician. 	
 Identify various employment opportunities for a Seed Processing Plant Technician. 	
Classroom Aids	
Training kit - Trainer Guide, Presentations, White	board, Marker, Projector, Laptop, Video Films
Tools, Equipment and Other Requirements	
NA	







Module 2: Preparation of work area and machineries for seed processing Mapped to AGR/N7115 v2.0

Terminal Outcomes:

- Describe the process of preparing the work area for seed processing.
- Demonstrate the process of preparing the seed processing tools, equipment and machineries.

Duration: 20:00	Duration: 35:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
 Explain the importance of ensuring a clean, dry and well-ventilated work area for seed processing. Describe the process of cleaning the seed processing area. List various tools, equipment and machineries required for seed processing. Explain the importance of checking tools, equipment and machineries before using them to ensure correct functioning. 	 Demonstrate the use of relevant Personal Protective Equipment (PPE), repair and maintenance tools and equipment used for seed processing. Show how to carry out minor infrastructural repair and maintenance in the work area. Demonstrate the process of carrying out minor repair and maintenance of the seed processing tools, equipment and machineries. Prepare a sample record of the repair and maintenance of the tools, equipment and machineries.
	'

Classroom Aids

Training kit (Trainer guide, Presentations). Whiteboard, Marker, Projector, Laptop

Tools, Equipment and Other Requirements

Seed Trier, Moisture Meter, Hot Air Oven for Seed Drying / Testing the Moisture, Scalper, Seed Cleaner (Air Screen Cleaner) Elevators Conveyors and Storage Bins







Module 3: Operation of the seed processing machineries Mapped to ARG/N7117 v2.0

Terminal Outcomes:

- Describe the process of preparing for seed processing.
- Demonstrate the process of pre-cleaning, cleaning and fine cleaning the seeds.
- Describe the process of grading the seeds.
- Demonstrate various practices for effective resource optimisation.

Theory – Key Learning Outcomes Pr	Practical – Key Learning Outcomes
	ractical – key Learning Outcomes
 Describe the process of segregating seeds according to the shape, structure, colour, and moisture content. Describe the process of labelling the seed lots before processing. State the appropriate temperature and humidity required for storing the seed lots. Explain the importance of preventing admixture with other seed lots. Explain the criteria for selecting an air screen cleaner. Explain the criteria for selecting a single indented cylinder or multiple cylinders in a series. Explain the criteria for selecting a gravity separator with a triangular deck or a rectangular deck. Explain the benefits of resource optimisation. 	 Show how to assess seeds for impurities. Show how to set up various seed processing machineries for use. Demonstrate the process of carrying out winnowing, scalping and deawning as part of the pre-cleaning of seeds. Demonstrate the process of installing and operating the air-screen cleaner. Demonstrate the installing and operating a single indented cylinder or multiple cylinders in a series. Demonstrate the process of installing and operating the gravity separator to grade the seeds. Demonstrate various practices to optimise the usage of various resources such as water and electricity.

Classroom Aids

Training Kit (Trainer Guide, Presentations). Whiteboard, Marker, Projector, Laptop

Tools, Equipment and Other Requirements

Air Screen Cleaner various types of Sieves such as Oblong, Round, Triangular and Wire Mesh, Elevators Conveyors. Gravity Separators, HDPE Bags, Cloth Bag, Metal Container (Tins) Cartoon Boxes, Lead Seal, Sealing Machine. Filling and closing Machine for Seeds like Vegetables. Producer Labels, Blue Tag, White Tag.







Module 4: Process of packing, weighing and storing the seeds Mapped to AGR/N7122 v1.0

Terminal Outcomes:

- Demonstrate the process of packing and weighing the seeds.
- Describe the process of preparing the storage area for storing the packed seeds.
- Demonstrate various waste management practices.

Duration: 30:00	Duration: 60:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
List different types of packing material suitable for packing seeds.	Demonstrate the process of packing and weighing the seed bags to ensure
 State the recommended temperature and relative humidity for storing the seeds. 	correct weight correctly.Show how to apply the necessary treatment in the storage area to
 Describe the process of preparing the storage area. 	 remove any pest, insects and rodents. Demonstrate the correct way of handling varieties of soods have in the
 Explain the correct way of handling varieties of seeds. 	handling varieties of seeds bags in the storage area.
 Describe the best practices for storing seeds to ensure their maximum shelf- life. 	 Show how to use wooden platforms, racks, and crates for safe storage of seeds.
 Explain the importance of following the recommended waste management practices. 	 Demonstrate the process of recycling and disposing different types of waste as per the applicable regulations.

Classroom Aids

Training kit (Trainer Guide, Presentations)

Tools, Equipment and Other Requirements

Packing Machine, Weighing Machine, Scale Balance or Electronic Balance for Weighing, Automatic Weighing etc.







Module 5: Maintenance of seed processing data Mapped to AGR/N7118 v2.0

Terminal Outcomes:

- Describe the process of maintaining the record of seed processing operations.
- Explain the importance of reviewing and auditing the records.

Duration: 15:00	Duration: 15:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
 Explain the importance of maintaining the data of seed processing operations. 	 Demonstrate the use of relevant Enterprise Resource Planning (ERP) system.
 State the relevant information to be recorded regarding the seed lots received for processing. 	 Prepare sample records with respect to different types of seeds processed, batch size, wastage of seeds, relevant
 State the relevant information to be recorded regarding the use of various machineries during seed processing. 	 observations, deviations, etc. Prepare a sample record of seeds packed, labelled and stored.
 Explain the importance of creating data backup to protect against accidental loss. 	 Show how to create a backup of the data to protect against accidental loss.
 Describe the process of reviewing and auditing various records to ensure compliance with the regulatory requirements. 	
Classroom Aids	

Tools, Equipment and Other Requirements

ESM Pneumatic Separators, Spiral Separator Indented Cylinder. Gunny Bags etc.







Module 6: Hygiene and cleanliness Mapped to NOS AGR/N9903 v3.0

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
 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. 	 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.
 Explain the importance of good housekeeping at the workplace. 	 Demonstrate the steps to follow to put on and take off a mask safely.
 Explain the importance of informing the designated authority on personal health issues related to injuries and infectious diseases. 	 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, Sanitiser, Soap, Mask







Module 7: Safety and emergency procedures Mapped to NOS AGR/N9903 v3.0

Terminal Outcomes:

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

 List the Personal Protective Equipment (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. 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 emergency procedures to the given workplace requirements. Demonstrate the use of emergency equipment in accordance with 	Duration: 17:00	Duration: 07:00
Equipment (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. 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 the use of emergency equipment in accordance with	Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
 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. 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 	Equipment (PPE) required at the	for leakages, water-logging, pests,
 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. 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 	hazards at the workplace.	PPE and implements as applicable to
 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. 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 	chemicals/pesticides/fumigants.Describe the basic safety checks to be	 Display the correct way of donning, doffing and discarding PPE such as face masks, hand gloves, face shields,
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 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 measures that can be taken to prevent accidents and damage s at the workplace. 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 	procedures to be followed in case of	machinery properly.
 Explain the importance of reporting details of first aid administered, to the reporting officer/doctor, in accordance with workplace procedures. Explain the importance of reporting emergencies. Demonstrate emergency procedures to the given workplace requirements. Demonstrate the use of emergency equipment in accordance with 	State measures that can be taken to	waste.
 details of first aid administered, to the reporting officer/doctor, in accordance with workplace procedures. Demonstrate emergency procedures to the given workplace requirements. Demonstrate the use of emergency equipment in accordance with 	·	,
procedures. • Demonstrate the use of emergency equipment in accordance with	details of first aid administered, to the reporting officer/doctor, in	
	•	,
guidelines to be followed at the workplace requirements.	 State common health and safety guidelines to be followed at the workplace. 	
workplace. • 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 (60 hours) Mapped to NOS DGT/VSQ/N0102 v1.0

Duration: 60:00

Key Learning Outcomes

Introduction to Employability Skills Duration: 1.5 Hours

After completing this programme, participants will be able to:

- 1. Discuss the Employability Skills required for jobs in various industries
- 2. List different learning and employability related GOI and private portals and their usage

Constitutional values - Citizenship Duration: 1.5 Hours

- 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
- 4. Show how to practice different environmentally sustainable practices.

Becoming a Professional in the 21st Century Duration: 2.5 Hours

- 5. Discuss importance of relevant 21st century skills.
- 6. Exhibit 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.
- 7. Describe the benefits of continuous learning.

Basic English Skills Duration: 10 Hours

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

Career Development & Goal Setting Duration: 2 Hours

11. Create a career development plan with well-defined short- and long-term goals

Communication Skills Duration: 5 Hours

- 12. Demonstrate how to communicate effectively using verbal and nonverbal communication etiquette.
- 13. Explain the importance of active listening for effective communication
- 14. Discuss the significance of working collaboratively with others in a team

Diversity & Inclusion Duration: 2.5 Hours

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

Financial and Legal Literacy Duration:5 Hours

- 17. Outline the importance of selecting the right financial institution, product, and service
- 18. Demonstrate how to carry out offline and online financial transactions, safely and securely
- 19. List the common components of salary and compute income, expenditure, taxes, investments etc.
- 20. Discuss the legal rights, laws, and aids







Essential Digital Skills Duration: 10 Hours

- 21. Describe the role of digital technology in today's life
- 22. Demonstrate how to operate digital devices and use the associated applications and features, safely and securely
- 23. Discuss the significance of displaying responsible online behavior while browsing, using various social media platforms, e-mails, etc., safely and securely
- 24. Create sample word documents, excel sheets and presentations using basic features
- 25. utilize virtual collaboration tools to work effectively

Entrepreneurship Duration: 7 Hours

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

Customer Service Duration: 5 Hours

- 30. Describe the significance of analysing different types and needs of customers
- 31. Explain the significance of identifying customer needs and responding to them in a professional manner.
- 32. Discuss the significance of maintaining hygiene and dressing appropriately

Getting Ready for apprenticeship & Jobs Duration: 8 Hours

- 33. Create a professional Curriculum Vitae (CV)
- 34. Use various offline and online job search sources such as employment exchanges, recruitment agencies, and job portals respectively
- 35. Discuss the significance of maintaining hygiene and confidence during an interview
- 36. Perform a mock interview
- 37. List the steps for searching and registering for apprenticeship opportunities







Annexure

Trainer Requirements

	Trainer Prerequisites					
Minimum Specializatio Educational		Relevant Industry Experience		Training Experience		Remarks
Qualification		Years	Specialization	Years	Specialization	
Diploma	Agriculture/ Seed technology	5	Seed Production and processing	0		
Graduate		3	Seed Production and processing	0		For the school Program minimum qualification of the Trainer should be Graduate. Their Teaching experience will be considered industry experience
Graduate	Agriculture / Horticulture / Botany/ Biotechnology/ Seed Technology	1	Seed Production and processing	0		
Post Graduate	Agriculture/ Seed technology/ Genetics and Plant breeding/ Plant Biotechnology	0		0		

Trainer Certification				
Domain Certification	Platform Certification			
Certified for Job Role "Seed Processing Plant Technician", mapped to QP: "AGR/Q7104, 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	onal		Relevant Industry Experience		ng/Assessment ence	Remarks
Qualification		Years	Specialization	Years	Specialization	
Graduation	B.Sc (Agriculture/ Agronomy/ Horticulture and related streams)	5	In operation of the machinery & seed processing practices and other related experience	0		Practical skills and knowledge required in operating various machineries
Post- Graduation	M.Sc (Agriculture/ Agronomy/ Seed Science & Technology/ Genetics & Plant Breeding/ Horticulture and related streams)	2	In operation of the machinery & seed processing practices and other related experience	0		Practical skills and knowledge required in operating various machineries
PhD	PhD (Agronomy/ Seed Science & Technology/ Genetics & Plant Breeding/ Horticulture and related streams)	1	In operation of the machinery & seed processing practices and other related experience	0		Practical skills and knowledge required in operating various machineries

Assessor Certification			
Domain Certification	Platform Certification		
"Seed Processing Plant Technician", "AGR/Q7104, 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. <u>Viva:</u> To assess awareness on processes (Oral and/or written questioning)
- 3. <u>Practical:</u> 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 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 empanelled 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 more 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 offers 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 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 standardization of the marking scheme.

Type of Evidence and Evidence Gathering Protocol:

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

- Geo Tagging 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
- o 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

- <u>Morning Check (Pre-Assessment)</u>: 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.
- <u>Video Calls</u>: 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
- <u>Evening Check (Post Assessment)</u>: Calls are made to the ground team to ensure the event is over by what time and the documentation is done properly or not.
- <u>TP Calling</u>: 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
- <u>Video and Picture Evidence:</u> 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.
- <u>Surprise Visit:</u> 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 to job rolespecific 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