



Model Curriculum

QP Name: Chick Sexing and Grading Technician

QP Code: AGR/Q4403

QP 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 & Allied
Sub-Sector	Poultry
Occupation	Poultry Hatchery Operations
Country	India
NSQF Level	3
Aligned to NCO/ISCO/ISIC Code	NCO-2015/6122.9900
Minimum Educational Qualification and Experience	Minimum Educational Qualification: Grade 10 OR Grade 8 with two years of (NTC/ NAC) after 8th OR Grade 8 pass and pursuing continuous schooling in regular school with vocational subject OR 8th grade pass with 2-year relevant experience OR 5th grade pass with 5-year relevant experience OR Previous relevant Qualification of NSQF Level 2 with 1-year relevant experience OR Previous relevant Qualification of NSQF Level 2.5 with 6 months' relevant experience Min Age:18 Years
Pre-Requisite License or Training	N/A
Minimum Job Entry Age	18 Years
Last Reviewed On	31-03-2022
Next Review Date	31-03-2025
NSQC Approval Date	31-03-2022
QP Version	3.0
Model Curriculum Creation Date	31-03-2022
Model Curriculum Valid Up to Date	31-03-2025

Model Curriculum Version	2.0
Minimum Duration of the Course	270 Hours
Maximum Duration of the Course	270Hours

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.

- Prepare work area for chicks grading/sexing: Cleanliness and hygiene maintenance, routine cleaning, safety procedures, tools and equipment, identify the foreign materials etc.
- Grade the Chicks and assess: Receive chicks, identification of sex of chicks, method of sexing of chicks, specifications, grades parameters, assess the chicks, parameters for assessment etc.
- Maintain the record book: eggs set in the month, incubator capacity utilization, chicks hatched per month, hatchability, percentage of culls, total saleable chicks, number of males and female chicks etc.
- Maintain health and safety: Clean and disinfect the hatchery, hygiene maintenance, proper disposal of waste/waste management etc.

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 Chick Sexing and Grading Technician	05:00	00:00	0:00	0:00	05:00
AGR/N4411: Prepare and maintain work area for sexing of chicks NOS Version- 2.0 NSQF Level- 4	10:00	15:00	0:00	0:00	25:00
Module 2: Preparation and maintenance of work area for Sexing of chicks	08:00	12:00	0:00	0:00	20:00
Module 3: Effective communication at the workplace	02:00	03:00	0:00	0:00	5:00
AGR/N4412: Carry out the process of chicks sexing NOS Version- 2.0 NSQF Level- 4	15:00	45:00	0:00	0:00	60:00
Module 4: Process of chicks sexing	15:00	45:00	0:00	0:00	60:00

AGR/N4413: Assess and grade the day old chicks NOS Version- 2.0 NSQF Level- 4	10:00	20:00	0:00	0:00	30:00
Module 5: Process of assessing and grading day old chicks	10:00	20:00	0:00	0:00	30:00
AGR/N4414: Maintain records related to sexing and grading of DOC NOS Version- 2.0 NSQF Level- 4	10:00	20:00	0:00	0:00	30:00
Module 6: Documentation and record keeping	10:00	20:00	0:00	0:00	30:00
AGR/N4410: Maintain safety, hygiene and sanitation of hatchery NOS Version- 2.0 NSQF Level- 3	10:00	20:00	0:00	0:00	30:00
Module 7: Safety, hygiene and sanitation of hatchery	3:00	03:00	0:00	0:00	6:00
Module 8: Safety, hygiene and sanitation of hatchery	7:00	17:00	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 9: Employability Skills	30:00	00:00	0:00	0:00	30:00
Total Duration	90:00	120:00	0:00	0:00	210:00
OJT: 60 hours					

Module Details

Module 1: Introduction to the role of a Chick Sexing and Grading Technician

Bridge Module

Terminal Outcomes:

- Discuss the role and responsibilities of a Chick Sexing and Grading Technician

Duration: 05:00	Duration: 0:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> • Explain the role of a Chick Sexer and Grader and the progression pathways • Describe the size and scope of the poultry industry. • Discuss about the working environment of hatchery • List the hatchery tools and equipment • Describe basic principles of Chicks sexing/grading • Describe the importance of grading of chicks • Discuss the concept chicks sexing • Explain the importance of sanitized environment and safety of the DOC 	
Classroom Aids:	
Training Kit - Trainer Guide, Presentations, Whiteboard, Marker, Projector, Laptop	
Tools, Equipment and Other Requirements	
NA	

Module 2: Preparation and maintenance of work area for Sexing of chicks

Mapped to AGR/N4411 v2.0

Terminal Outcomes:

- Prepare sheds for bird sexing and maintaining them to ensure safety and hygiene of the birds

Duration: 8:00	Duration: 12:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> • Explain productivity and quality standards • Explain infrastructure requirement for sexing of chicks • Discuss about importance of maintaining of farm equipment • Describe the environmental conditions required at broiler farm- adequate light, heat, clean water, feed • Discuss the conducive environment during sexing. • Explain different grading and sexing techniques and methods • Discuss the waste disposal techniques, need and importance • Explain the importance of separate spaces for male and female chicks • Explain the rules and regulations pertaining to hatchery management • Explain relevant legislation, standards, policies and procedures for preparation & management of hatchery • Explain relevant health and safety requirements applicable to the work environment • Explain waste disposal techniques as per the industry guidelines and policies • Explain the impact of not following the health, hygiene, safety and quality standards on birds, consumers and the business 	<ul style="list-style-type: none"> • Demonstrate the procedure to clean and maintain hygiene of work area as per industry norms • Organize all the tools and equipment and furniture required to facilitate sexing of DOC • Demonstrate the use of tools and equipment required such as sanitizers, insect pest repellents as per bio security norms • Demonstrate how to maintain the tools and equipment required to facilitate grading • Demonstrate preparation of cleaning schedule • Maintain the safety procedures at the work place • Demonstrate the working methods and systems which promote health and safety of the birds and which are in alignment with the standard operating procedures • Create the Footbath at the entrance • Demonstrate the procedure for disposing hatchery waste in eco-friendly manner
Classroom Aids:	
Training Kit - Trainer Guide, Presentations, Whiteboard, Marker, Projector, Laptop	
Tools, Equipment and Other Requirements	
Sanitizer, Pests Repellents, Chemicals for Foot Bath	

Module 3: Effective communication at the workplace

Mapped to NOS AGR/N4411 v2.0

Terminal Outcomes:

- Apply techniques for effective communication with the stakeholders.
- Explain how to mentor an apprentice.
- Discuss ways to promote diversity and inclusion at the workplace.

Duration: 02:00	Duration: 3:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> • Explain the importance of verbal and non-verbal communication at the workplace. • Explain the effective methods of sharing and seeking information and feedback at the workplace. • Explain the procedure for completing work-related documentation. • Describe the process of mentoring an apprentice at the workplace. • Explain the importance of inclusion of all genders and People with Disability (PwD) at the workplace. • Explain gender concepts (gender as a social construct, gender sensitivity, gender equality etc.), issues and applicable legislation. • Explain ways in which a conducive working environment can be created for all genders and PwD. • Define the need for appropriate verbal and non-verbal communication while interacting with all genders and PwD. • Explain the applicable PwD related regulations. • Explain the procedure to report inappropriate behaviour e.g., harassment. 	<ul style="list-style-type: none"> • Demonstrate the requisite level of proficiency in verbal and non-verbal communication at the workplace. • Demonstrate different approaches to mentoring an apprentice at the workplace. • Prepare a sample training schedule for an apprentice. • Demonstrate appropriate verbal and non-verbal communication that is respectful of gender and disability.
Classroom Aids:	
Trainee’s Training Kit and Guide, Power-Point Presentation, Computer, Projector, Black/ Whiteboard. Charts and Videos on Workplace Communication.	
Tools, Equipment and Other Requirements	
Workplace Records and Documents.	

Module 4: Process of chicks sexing

Mapped to AGR/N4412 v2.0

Terminal Outcomes:

- Perform the task of chick sexing and grading

Duration: 15:00	Duration: 45:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> • Compare the differences between Sexing and Grading • Explain the importance of Chick sexing • Discuss the principles of Chick sexing • List the parameters and methods of Chick sexing • Explain the process of Vent Sexing • Explain the parameters for Culling • Explain the guidelines for grading • Explain the process of feather sexing • Describe about proper ventilation, light required for carrying out the chick sexing process • Explain bio-safety protocols to dispose waste • Demonstrate types of sexing techniques followed by the organization • Explain poultry waste management and methods of waste disposal 	<ul style="list-style-type: none"> • Analyse the Grading Techniques • Follow grading standards such as chick deformities, navels healed/ unhealed, minimum weight, physical appearance, health conditions etc. • Examine the chicks wing feathers to determine its sex • Demonstrate the process of Vent Sexing • Demonstrate how to place males in one box and females in another box • Demonstrate how to repeat the sexing process in case of any uncertainty • Analyse critical points in day to day tasks through experience and observation and identify control measures to solve the issue • Demonstrate how to maintain the records of sexing date and medicines. • Demonstrate segregation of waste into different categories • Demonstrate procedure for disposal of waste as per SOP
Classroom Aids:	
Training Kit - Trainer Guide, Presentations, Whiteboard, Marker, Projector, Laptop, Parameters for Chick Sexing and Culling(Chart), Chart with procedures explaining vent and feather sex with good pictures	
Tools, Equipment and Other Requirements	
NA	

Module 5: Process of assessing and grading day old chicks

Mapped to AGR/N4413 v2.0

Terminal Outcomes:

- Maintain quality of chicks as per standards
- Grade the chicks

Duration: 10:00	Duration: 20:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> • List the types of grading techniques followed by the organization • Describe the infrastructure requirement for grading of DOC • Explain about conducive environment for assessment of DOC • Explain the grading process of chick sexing • Discuss about maintenance of proper ventilation, light, for carrying out the grading process • Explain poultry waste management • List different parameters for assessing the quality of chicks • Explain the relevant health and safety requirements applicable to the work environment • Explain different grading techniques • Explain the impact of not following the health, hygiene, safety and quality standards on birds, consumers and the business 	<ul style="list-style-type: none"> • Investigate the Production chain • Demonstrate the assessment parameters: chick weight, chick length, feather length, navel, beak and joints, belly quality appearances, chick health activity and behaviour of chicks etc. • Investigate handling process of chicks • Demonstrate the process of assessment of DOC • Examine the chicks for clean and dry feathers • Examine the beaks of chicks for any deformity or spots • Examine the navel of DOC for skin colour • Examine the response of chicks to stimuli such as light and other movements of human hands • Observe the legs of chicks and check for free movement • Demonstrate the process of segregation and removal of the chicks with leg injuries or spread legs • Inspect the quality of the chicks as per the standards of the organization • Demonstrate the grading process of DOC
Classroom Aids:	
Training Kit - Trainer Guide, Presentations, Whiteboard, Marker, Projector, Laptop and Parameters for Assessment (Chart)	
Tools, Equipment and Other Requirements	
NA	

Module 6: Documentation and record keeping

Mapped to AGR/N4414 v2.0

Terminal Outcomes:

- Maintain the records related to management of sexing of chickens and other hatchery related data

Duration: 10:00	Duration: 20:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> • Discuss the importance of documentation and maintenance of accurate and complete production records • Explain about the different records to be maintained for chick sexing and grading and other hatchery related activities • Explain about methods to track back the record from finished product to raw material • Explain the procedures of record keeping both manually and digitally (if available) • Explain documentation system followed by the organization 	<ul style="list-style-type: none"> • Demonstrate the procedure for documentation and maintenance of records for chickens in the hatchery such as eggs set in the months, incubator capacity utilization, chicks hatched per month, hatchability, percentage of culls, total saleable chicks, vaccines used, vaccination schedule etc. • Demonstrate the procedure to document and maintain records of number of male and female chicks during the sexing operation • Demonstrate the procedure to document and maintain records of flock-wise cost for sexing and grading • Demonstrate the procedure to document and maintain the costs involved in chick sexing and grading
Classroom Aids:	
Training Kit - Trainer Guide, Presentations, Whiteboard, Marker, Projector, Laptop	
Tools, Equipment and Other Requirements	
Record books, Bills for expenses, Budget allocation sheet, Receipt invoice etc.	

Module 7: Hygiene and cleanliness

Mapped to NOS AGR/N4410 v2.0

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 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 8: Safety, hygiene and sanitation of hatchery

Mapped to AGR/N4410 v2.0

Terminal Outcomes:

- Maintain the safety, hygiene and sanitation of hatchery required for quality standards

Duration: 07:00	Duration: 17:00
Theory – Key Learning Outcomes <ul style="list-style-type: none"> • List the measures to maintain health and safety at the work place • Explain the importance of hygiene at the farm • Explain the possible physical, chemical and biological hazards and methods of prevention • Explain personal hygiene requirements • Describe the environmental conditions required at farm • Explain the safety checklist and procedures followed by the organization • Discuss the bio-security protocols • Explain safe waste disposal methods • Explain physical, chemical and biological hazards and methods of prevention • Discuss different types of sanitizers used for storage area and equipment and the procedure to use • Demonstrate the importance of using disposal containers for transportation of eggs • Explain the importance of incinerator for burning waste and its advantages and disadvantages • Explain the organization standards and procedures followed in the case of any health emergency or accident 	Practical – Key Learning Outcomes <ul style="list-style-type: none"> • Demonstrate the procedure to maintain the equipment of hatchery • Maintain a clean and efficient workplace • Demonstrate the procedure for proper disposal of waste • Demonstrate the bio-security protocols • Maintain proper temperature level, light intensity, moisture level, ventilation etc. • Apply appropriate emergency procedures and report to supervisor • Demonstrate general safety and first aid procedures • Identify the problems before hand and take preventive measures • Provide treatment appropriate to the patient's injuries • Demonstrate the procedure for fumigation of egg after collection • Demonstrate sorting of dirty and cracked eggs as soon as possible and dispose them immediately • Demonstrate the methods of disinfecting the setting and hatching trays, incubator, hatcher rooms, and instruments and equipment used for the sexing operation, before and after use • Identify infertile eggs, non-hatched eggs, membranes, eggshell for disposal
Classroom Aids:	
Training Kit - Trainer Guide, Presentations, Whiteboard, Marker, Projector, Laptop	
Tools, Equipment and Other Requirements	
First Aid Kit, Disinfectants, Sanitizers, Sprayer, Face Mask, Gloves, Gum Boots, Disposal Bags	

Module 9: 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

Module 10: On-the-Job Training

Mapped to QP AGR/Q4403 v2.0

Mandatory Duration: 60:00	Recommended Duration: 00:00
Location: On Site	
Terminal Outcomes	
<ul style="list-style-type: none"> • Show how to assess the chicks' quality after hatching and separating the males from females as per the standards followed by the organization • Demonstrate how to prepare and maintain work area for sexing of chicks • Show how to ensure sanitized environment and safety of the DOC • Discuss relevant legislation, standards, policies and procedures for preparation & management of hatchery • Explain relevant health and safety requirements applicable to the work environment • Show how to carry out the process of vent sexing for DOC • Demonstrate how to carry out the process of feather sexing for DOC • Show how to assess and grade Day Old Chicks (DOC) • Demonstrate how to maintain various records related to sexing and grading of DOC manually or electronically as per organization policy • Show how to maintain proper hatchery sanitation • Demonstrate proper hatchery waste disposal and compliance with bio-security protocols 	

Annexure

Trainer Requirements

Trainer Prerequisites						
Minimum Educational Qualification	Specialization	Relevant Industry Experience		Training Experience		Remarks
		Years	Specialization	Years	Specialization	
Diploma	veterinary /Animal Husbandry / Poultry	3	Poultry Farming	0	NA	Regular Diploma more than 15 months
Graduate	Graduate in any stream (with 10+2 in Science) except Agriculture	3	Poultry Farming	0	NA	For the school Program minimum qualification of the Trainer should be Graduate in Zoology with minimum 3 years Teaching experience (will be considered industry experience)
Graduate	Agriculture	2	Poultry Farming	0	NA	
B. V. Sc.		0	Poultry Farming	0	NA	
MSc	Animal science	0	Poultry Farming	0	NA	

Trainer Certification	
Domain Certification	Platform Certification
Certified for Job Role: “ Chick Sexing and Grading Technician ” mapped to QP: “AGR/Q4403, 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. V. Sc.		4	In Animal Science/Veterinary Science /Poultry Science and related streams	0		Practical skills and knowledge required in livestock selection, handling, sexing and maintaining site biosecurity
B. Tech	Poultry Production Technology	4	In Animal Science/Veterinary Science /Poultry Science and related streams	0		Practical skills and knowledge required in livestock selection, handling, sexing and maintaining site biosecurity
B. Sc	Animal Husbandry & Dairying/Poultry Production and Business Management	5	In Animal Science/Veterinary Science /Poultry Science and related streams	0		Practical skills and knowledge required in livestock selection, handling, sexing and maintaining site biosecurity
M. Sc	Animal Science/Poultry Production/Poultry Science/Applied Poultry Science	2	In Animal Science/Veterinary Science /Poultry Science and related streams	0		Practical skills and knowledge required in livestock selection, handling, sexing and maintaining site biosecurity
M. V. Sc		2	In Animal Science/Veterinary Science /Poultry Science and related streams	0		Practical skills and knowledge required in livestock selection, handling, sexing and maintaining site biosecurity
Ph. D	Poultry Science/Animal Science/ Veterinary Science/Animal Genetics and Breeding	1	In Animal Science/Veterinary Science /Poultry Science and related streams	0		Practical skills and knowledge required in livestock selection, handling, sexing and maintaining site biosecurity

Assessor Certification

Domain Certification	Platform Certification
“Chick Sexing and Grading Technician”, “AGR/Q4403, 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 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 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 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
 - 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 to 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
Sector	The Sector is a conglomeration of different business operations having similar business and interests. It may also be defined as a distinct subset of the economy whose components share similar characteristics and interests
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