



Model Curriculum

QP Name: Laboratory Animal Attendant

QP Code: AGR/Q4606

QP Version: 2.0

NSQF Level: 4

Model Curriculum Version: 1.0

Agriculture Skill Council of India || Agriculture Skill Council of India (ASCI), 6th Floor, GNG Tower,
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Training Parameters

Sector	Agriculture and Allied
Sub-Sector	Animal Husbandry
Occupation	Captive and Small Animals Management
Country	India
NSQF Level	4
Aligned to NCO/ISCO/ISIC Code	NCO-2015/ 3240.0300
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	20/11/2020
Next Review Date	20/11/2025
NSQC Approval Date	20/11/2020

QP Version	2.0
Model Curriculum Creation Date	20/11/2020
Model Curriculum Valid Up to Date	20/11/2025
Model Curriculum Version	1.0
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.

- Handle different types of the laboratory animals safely.
- Provide care to the laboratory animals.
- Provide animal-specific habitat and feed.
- Assist a veterinarian in the breeding process of the laboratory animals.
- Administer euthanasia on the laboratory animals, if required.
- Maintain records as per the procedure.
- Applicable rules and instructions of the Animal Ethics Committee (AEC)
- Applicable rules and instructions of the Committee for the Purpose of Control and Supervision of Experiments on Animals (CPCSEA)
- Communicate effectively with the stakeholders.
- Practice occupational health and safety, hygiene and sanitation and quality standards at workplace.

Compulsory Modules

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

NOS and Module Details	Theory Duration	Practical Duration	On-the-Job Training Duration (Mandatory)	On-the-Job Training Duration (Recommended)	Total Duration
Bridge Module	05:00	05:00	00:00	00:00	10:00
Module 1: Introduction to Animal Laboratory and the job role	05:00	05:00	00:00	00:00	10:00
AGR/N4618 – Handle different types of laboratory animals NOS Version No. - 1.0 NSQF Level – 4	50:00	60:00	00:00	00:00	110:00
Module 2: Identify and handle different types of the laboratory animals	35:00	35:00	00:00	00:00	70:00
Module 3: Maintain the health and hygiene standards	15:00	25:00	00:00	00:00	40:00
AGR/N4619 – Assist in the breeding process of the laboratory animals NOS Version No. – 1.0 NSQF Level - 4	20:00	40:00	00:00	00:00	60:00
Module 4: Assist in the breeding process of the laboratory animals	20:00	40:00	00:00	00:00	60:00
AGR/N4620 – Carry out euthanasia on the laboratory animals NOS Version No. – 1.0 NSQF Level - 4	25:00	35:00	00:00	00:00	60:00
Module 5: Carry out euthanasia	25:00	35:00	00:00	00:00	60:00
AGR/N9919: Ensure resource optimization and occupational health and safety in animal facilities NOS Version No. 2.0 NSQF Level 4	20:00	40:00	00:00	00:00	60:00
Module 6: Optimize resource utilization at the workplace	08:00	08:00	00:00	00:00	16:00
Module 7: Maintain a safe workplace	12:00	32:00	00:00	00:00	44:00
DGT/VSQ/N0102 Employability Skills	60:00	00:00	0:00	0:00	60:00

NOS Version-1.0					
NSQF Level-4					
Module 8: Employability Skills	60:00	00:00	0:00	0:00	60:00
Total Duration	180:00	180:00	00:00	00:00	360:00
OJT: 30 hours					

Module Details

Module 1: Introduction to Animal Laboratory and the job role

Bridge module

Terminal Outcomes:

- Describe the career opportunities in animal laboratory sector.
- Explain the role and responsibilities of a laboratory animal attendant.
- Explain the functioning of an animal laboratory.

Duration: 05:00	Duration: 05:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> • Describe the available livelihood opportunities and career progression in the animal laboratory sector. • Define the role and responsibilities of an animal laboratory attendant. • Describe the organisational structure and functioning of an animal laboratory. • Explain the applicable rules and instructions of the Animal Ethics Committee (AEC) and the Committee for the Purpose of Control and Supervision of Experiments on Animals (CPCSEA). 	<ul style="list-style-type: none"> • Label the layout of an animal laboratory. • Prepare the checklist for inspection of the animal lab in line with the AEC and CPCSEA rules.
Classroom Aids:	
Trainee's training kit, computer, projector, black/ white board.	
Tools, Equipment and Other Requirements	
N/A	

Module 2: Handle different types of the laboratory animals

Mapped to NOS AGR/N4618 v1.0

Terminal Outcomes:

- Identify and handle different types of the laboratory animals.
- Feed the laboratory animals.

Duration: 35:00	Duration: 35:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> • Classify different types of the laboratory animals. • Explain the importance of communicating with the laboratory animals. • Distinguish between normal and abnormal behaviour of the laboratory animals. • Discuss the methods of safe handling of specific laboratory animals. • Discuss the food habits and ways of feed preparation of the different types of laboratory animals. • Explain the process and importance of sterilising the animal food items and utensils. • Explain the importance of adhering to occupational health and safety, hygiene and sanitation and quality standards at the workplace. 	<ul style="list-style-type: none"> • Demonstrate how to interact with the animals in a non-threatening manner. • Demonstrate the methods of handling of laboratory animals safely. • Prepare a sample diet plan for a specific type of laboratory animal. • Label a sample cage used in the animal facility. • Record the details of the feed given to a sample group of animals. • Demonstrate the process of sterilising food items and utensils. • Prepare a checklist for monitoring animals.
Classroom Aids:	
<ul style="list-style-type: none"> • Trainee’s training kit and guide. • Trainer’s guide, Power Point presentation, computer, projector, black/ white board. • Charts and videos on different types of laboratory animals; food habits of the laboratory animals and methods of sterilising the food and utensils. • Records and documents – animal house register. 	
Tools, Equipment and Other Requirements	
<ul style="list-style-type: none"> • Areas – Animal house of the laboratory. • Animal – live laboratory animals (s). • Training kit – Animal cage/ crate, bedding material, food and water bowls, food items, pantry, diet plan. 	

Module 3: Maintain the health and hygiene standards

Mapped to NOS AGR/N4618 v1.0

Terminal Outcomes:

- Follow the desired health and hygiene standards in the animal house.
- Assist in keeping the laboratory animals in quarantine.

Duration: 15:00	Duration: 25:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> • Identify the habitat requirement of different types of laboratory animals. • Explain the methods of maintaining desired hygiene and sanitation (sterilization, fumigation etc.) standards in the animal house. • Identify the equipment and chemicals needed for the sterilisation and fumigation. • Identify the Personal Protective Equipment (PPE) to be used during the sterilisation and fumigation process. • Explain the process of keeping the animals in quarantine. • Explain the method of monitoring the health of the quarantined animal. • Explain the type of personal inoculation and health check-up required and its frequency. • Describe the method of disposal of waste including bio-medical waste. 	<ul style="list-style-type: none"> • Prepare a sample bed for a particular laboratory animal. • Prepare a sample cleaning and sterilisation schedule of animal cages and animal house. • Demonstrate cleaning of the animal house and the animal cages. • Demonstrate the preparation of the solution mixture for cleaning and fumigation tasks. • Demonstrate the method of fumigation of the animal house and the animal cages. • Demonstrate the use of the PPE.
Classroom Aids:	
<ul style="list-style-type: none"> • Trainee’s training kit and guide. • Trainer’s guide, Power Point presentation, computer, projector, black/ white board. • Charts and videos on different types of laboratory animals; food habits of the laboratory animals and methods of sterilisation and fumigation. • Records and documents – animal house register. 	
Tools, Equipment and Other Requirements	
<ul style="list-style-type: none"> • Areas – Animal house of the laboratory. • Animal – live laboratory animals (s). • Training kit – Animal cage/ crate, bedding material, food and water bowls, food items, pantry, diet plan. 	

Module 4: Assist in the breeding process of the laboratory animals

Mapped to NOS AGR/N4619 v1.0

Terminal Outcomes:

- Facilitate the breeding programme of the laboratory animals.

Duration: 20:00	Duration: 40:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> Discuss the activities involved in breeding of the laboratory animals. Identify breed-specific breeding season/ time for laboratory animals. Explain the nutritional requirement of the breeding animals. Describe the required habitat and ambience to facilitate breeding of the laboratory animals. Explain the process of weaning the young ones from the mother. Discuss ways to carry out sexing of the young ones. Explain how to ensure safety of oneself and the animal. Describe the reporting procedure at the workplace for birth and death of animals 	<ul style="list-style-type: none"> Prepare a sample animal cage for breeding. Prepare a sample feed for different types of breeding animals. Prepare a birthing box. Identify the signs of impending birthing in a sample animal. Demonstrate the process of weaning of young ones from the mother. Demonstrate the process of sexing of the young ones Prepare a sample record of the births and deaths of the animals. Prepare a sample batch of the young animals. Demonstrate safe disposal of the waste material including the dead animals.
Classroom Aids:	
<ul style="list-style-type: none"> Trainee’s training kit and guide. Trainer’s guide, Power Point presentation, computer, projector, black/ white board. Charts and videos on different types of laboratory animals; breeding of laboratory animals and methods of sexing, weaning and batching. Records and documents – animal house register. 	
Tools, Equipment and Other Requirements	
<ul style="list-style-type: none"> Areas – Animal house of the laboratory. Animal – live laboratory animals (s). Training kit – Animal cage/ crate, bedding material, food and water bowls, food items, pantry, diet plan. 	

Module 5: Carry out euthanasia

Mapped to NOS AGR/N4620 v1.0

Terminal Outcomes:

- Euthanize unwanted animals as per instructions.
- Carry out safe disposal of dead animals.

Duration: 20:00	Duration: 35:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> • Describe the process and methods of carrying out euthanasia on laboratory animals. • Explain the requirement and procedure for preserving the dead bodies of the animals. • Describe the method of disposal of the dead animals and other bio-medical waste in a safe and environment friendly manner. • Describe the role and responsibilities of laboratory animal attendant during post-mortem of the dead animals. • Explain the hygiene and sanitation standards to be followed for handling dead animals. • Explain the applicable rules and instructions of the AEC and CPCSEA. 	<ul style="list-style-type: none"> • Demonstrate the process of segregation of animals earmarked for euthanasia. • Prepare a sample report on a euthanasia project. • Demonstrate the method of carrying out euthanasia as per the selected process. • Demonstrate disposal of dead animals in a safe and environment friendly manner.
Classroom Aids:	
<ul style="list-style-type: none"> • Trainee’s training kit and guide. • Trainer’s guide, Power Point presentation, computer, projector, black/ white board. • Charts and videos on administering euthanasia on laboratory animals. • Records and documents – animal house register. 	
Tools, Equipment and Other Requirements	
<ul style="list-style-type: none"> • Areas – Animal laboratory/ animal house. • Animal – live laboratory animals. • Euthanasia kit – Euthanasia chamber, Euthanasia gas. • Personal Protective Equipment. 	

Module 6: Effective communication at the workplace

Mapped to NOS AGR/N9918 v2.0

Terminal Outcomes:

- Ensure effective communication with the stakeholders.
- Be able to mentor an apprentice.
- Promote diversity and inclusion at the workplace.

Duration: 08:00	Duration: 08:00
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 legislations. • Explain ways in which a conducive working environment can be created for all the 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 behavior e.g. harassment. 	<ul style="list-style-type: none"> • Demonstrate requisite level of proficiency in verbal and non-verbal communication at the workplace. • Demonstrate different approaches of 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 genders and disability.
Classroom Aids:	
<ul style="list-style-type: none"> • Trainee’s training kit and guide. • Trainer’s guide, Power Point presentation, computer, projector, black/ white board. • Charts and videos on workplace communication. 	
Tools, Equipment and Other Requirements	
<ul style="list-style-type: none"> • Workplace records and documents. 	

Module 7: Optimize resource utilization at the workplace

Mapped to NOS AGR/N9919 v2.0

Terminal Outcomes:

- Identify different types of resources available at the workplace.
- List the methods of resource optimisation at the workplace.
- Handle different types of waste generated at the workplace.

Duration: 08:00	Duration: 08:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> • List the different types of resources available at the workplace. • Explain practices for resources conservation including water and electricity in various tasks/activities/processes. • Explain the benefits of resource optimization. • List practices that result in inefficient utilization of resources. • Explain the environment friendly work practices. • Distinguish recyclable, non-recyclable and hazardous waste at the workplace. • Describe waste management and methods of waste disposal. 	<ul style="list-style-type: none"> • Demonstrate different methods of resource conservation at the workplace. • Demonstrate segregation of waste into different categories. • Demonstrate how to dispose-off the waste as per the procedure. • Demonstrate how to deposit recyclable and reusable material at identified location.
Classroom Aids:	
<ul style="list-style-type: none"> • Trainee’s training kit and guide. • Trainer’s guide, Power Point presentation, computer, projector, black/ white board. • Charts and videos on resource utilization and waste disposal. 	
Tools, Equipment and Other Requirements	
<ul style="list-style-type: none"> • Animal house/ laboratory. 	

Module 8: Maintain a safe workplace

Mapped to NOS AGR/N9919 v2.0

Terminal Outcomes:

- Interpret workplace organizational health and safety and emergency procedures.
- Ensure safety of both animal and self.
- Carry out basic safety check at the workplace.

Duration: 12:00	Duration: 32:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> • Describe the organizational health and safety and emergency procedures applicable for the workplace. • Explain the importance of inoculations for self and the animals. • Explain how to safely store equipment and materials at the workplace. • Explain the procedure for reporting accidents and incidents. • Discuss the procedures for dealing with accidents, fires and other emergencies at the workplace. • Describe the process of administering first-aid. • Describe the process of evacuation of affected persons and animals. 	<ul style="list-style-type: none"> • Demonstrate how to assess possible risks and hazards to self, co-workers and the animals at the workplace. • Demonstrate how to assess the behavior of the animals and restrain them as per the procedure. • Demonstrate the methods of ensuring safety of both animal and self. • Demonstrate the safe use of equipment (e.g. PPE) and materials. • Demonstrate how to maintain emergency equipment and the PPE. • Demonstrate emergency evacuation and first aid procedures.
Classroom Aids:	
<ul style="list-style-type: none"> • Trainee’s training kit and guide. • Trainer’s guide, Power Point presentation, computer, projector, black/ white board. • Charts and videos on fire-fighting, first aid and emergency procedures at workplace. 	
Tools, Equipment and Other Requirements	
<ul style="list-style-type: none"> • Personal Protection Equipment - clothing, apron, boots, gloves, face mask, stick. • Firefighting and safety equipment – fire extinguishers, fire-fighting equipment, safety signage, evacuation equipment, first aid kit, stretcher. • Animal house/ laboratory 	

Module 9: 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 Educational Qualification	Specialization	Relevant Industry Experience		Training Experience		Remarks
		Years	Specialization	Years	Specialization	
1. 10+2	Science (Biology)	07	Animal Laboratory Management			In case the person is certified in Veterinary Clinical Assistant [QP Code: AGR/Q4802,NSQF-5] or Veterinary Field Assistant[QP Code: AGR/Q4801,NSQF-5]-3 years' experience in Animal Laboratory Management
2. Diploma (more than 15 months)	Veterinary/Animal Husbandry	05	Animal Laboratory Management			
3. Graduation	Zoology	03	Animal Laboratory Management			For B.V.Sc., 01-year experience in Animal Laboratory Management For B.Voc. (Livestock Production and Management)/ B.Sc. (Animal Science) experience in Animal Laboratory Management required is 3 years

Trainer Certification	
Domain Certification	Platform Certification
Certified for the Job Role: " <u>Laboratory Animal Attendant</u> ", mapped to QP: " <u>AGR/Q4606, v2.0</u> ". Minimum accepted score is 80%.	Certified for the Job Role: " <u>Trainer (Vet and Skills)</u> ", mapped to the Qualification Pack: " <u>MEP/Q2601, v2.0</u> ". Minimum accepted score as per MEPS guidelines is 80%.

Assessor Requirements

Assessor Prerequisites						
Minimum Educational Qualification	Specialization	Relevant Industry Experience		Training/Assessment Experience		Remarks
		Years	Specialization	Years	Specialization	
School Education (10+2)	Ex. Employee- any govt. organization / Medical Institute/ Research Lab in related activities	07	In Animal Lab Management/ Animal Science/Veterinary Science or related fields	0		Practical skills and knowledge required in care and management of laboratory animals
Graduation	B. V. Sc.	02	In Animal Lab Management/ Animal Science/Veterinary Science or related fields. OR B. Sc (Animal Sciences) with 4 years' experience in Animal Lab Management/ Animal Science/Veterinary Science or related fields OR B.Voc(Livestock Production and Management) with 5 years' work experience	0		Practical skills and knowledge required in care and management of laboratory animals
Post - Graduation	M. V. Sc (Animal Breeding and related streams) OR M Sc (Animal Science and related field)	0.5	In Animal Lab Management/ Animal Science/Veterinary Science or related fields	0		Practical skills and knowledge required in care and management of laboratory animals
PhD	Animal sciences and other related streams	1	In Animal Lab Management/ Animal Science/Veterinary Science or related fields	0		Practical skills and knowledge required in care and management of laboratory animals

Assessor Certification	
Domain Certification	Platform Certification
<p>Certified for the Job Role: "<u>Laboratory Animal Attendant</u>", mapped to QP: "<u>AGR/Q4606, v2.0</u>". Minimum accepted score is 80%</p>	<p>Certified for the Job Role: "Assessor (Vet and Skills)", mapped to the Qualification Pack: "<u>MEP/Q2701, v2.0</u>". Minimum accepted score is 80%</p>

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 ground through qualified and ToA certified assessors.

While it is important that an individual has adequate knowledge and skills to perform a specific task, weight age for different aspects for assessment are 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 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 assessment location.

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

- Multilingual assessments (ASCI is conducting 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 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 training / within 7 days of

completion of training.

- Assessment will be conducted at the training venue
- 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 practical 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 question, etc. which will test the trainee on his theoretical knowledge of the subject.
- The theory, practical and viva assessments will be carried out on same day. In case of more number of candidates, 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 usability of job roles/advantages /importance of adherence to procedures. Viva will be used to gauge trainee's confidence and correct knowledge in handling 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, behavioral traits and domain knowledge.

Theoretical Knowledge - Item constructs and types are determined by 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 which 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 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, do's and don'ts, subjective questions to check understanding of practical tasks.

Assessor has to go through orientation program organized by Assessment Agency. The training would give an overview to the assessors on the overall framework of QP evaluation. Assessor shall be given a NOS and PC level overview of each QP as applicable. 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 which will maintain standardization of marking scheme.

Type of Evidence and Evidence Gathering Protocol:

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

- Geo Tagging to track ongoing assessment
- AA's coordinator emails the list of documents and evidences (photos and videos) to the assessor one day prior to the assessment. List is mentioned below:
 - Signed Attendance sheet
 - Assessor feedback sheet
 - Candidate feedback sheet
 - Assessment checklist for assessor
 - Candidate Aadhar/ID card verification
 - Pictures of 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, Technical assistant popularly known as Proctor also ensures the proper documentation and they verify each other's tasks.
- To validate their work on the day of assessment, regular calls and video calls are done.
- On-boarding and training of assessor and proctor is done on timely basis to ensure that 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 check on assessment quality and ensure assessment is carried out in fair and transparent manner
- **Aadhar verification** of candidates
- **Evening Check (Post Assessment):** Calls are made to the ground team to ensure event is over by what time and the documentation is done in proper manner or not.
- **TP Calling:** To keep check on malpractice activity, independent audit team calls to TP on recorded line to take confirmation if there was any malpractice activity observed in assessment on part of AA/SSC team. If calls are not connected, email is send to TP SPOC for taking their confirmation
- **Video and Picture Evidence:** Backend team collects video and pictures for assessment on real time basis and highlights any issue like, Students sitting idle/trainer allowed for helping out candidates during assessment.
- **Surprise Visit:** Time to time SSC/AA Audit team can visit the assessment location and do surprise audit for assessment process carried out by ground team.
- **Geo Tagging:** On day of assessment, each technical SPOC is required to login in our internal app which is Geo tagged. Any deviation with centre address needs to be highlighted to assessment team on real-time basis.

Method for assessment documentation, archiving, and Access:

- ASCI has fully automated result generation process in association with multiple AAs
- Theory, Practical and Viva marks forms the basis of the results and encrypted files generated to avoid data manipulation. All responses captured and stored in System with Time-Stamps at the end of AAs and SSC. NOS-wise and PC-wise scores can be generated.
- Maker Checker concept: 1 person prepares results and other audit result which is internally approved by AA at first and then gets vetted at the end of SSC
- All soft copy of documents is received from the on-ground tech team over mail. The same are downloaded by our internal backend team and saved in Repository. The repository consists of scheme wise folders. These scheme wise folders have 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 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 conclusion of project or scheme)

References

Glossary

Sector	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.
Sub-sector	Sub-sector is derived from a further breakdown based on the characteristics and interests of its components.
Occupation	Occupation is a set of job roles, which perform similar/ related set of functions in an industry.
Job role	Job role defines a unique set of functions that together form a unique employment opportunity in an organisation.
Occupational Standards (OS)	OS specify the standards of performance an individual must achieve when carrying out a function in the workplace, together with the Knowledge and Understanding (KU) they need to meet that standard consistently. Occupational Standards are applicable both in the Indian and global contexts.
Performance Criteria (PC)	Performance Criteria (PC) are statements that together specify the standard of performance required when carrying out a task.
National Occupational Standards (NOS)	NOS are occupational standards which apply uniquely in the Indian context.
Qualifications Pack (QP)	QP comprises the set of OS, together with the educational, training and other criteria required to perform a job role. A QP is assigned a unique qualifications pack code.
Unit Code	Unit code is a unique identifier for an Occupational Standard, which is denoted by an 'N'
Unit Title	Unit title gives a clear overall statement about what the incumbent should be able to do.
Description	Description gives a short summary of the unit content. This would be helpful to anyone searching on a database to verify that this is the appropriate OS they are looking for.

Scope	Scope is a set of statements specifying the range of variables that an individual may have to deal with in carrying out the function which have a critical impact on quality of performance required.
Knowledge and Understanding (KU)	Knowledge and Understanding (KU) are statements that together specify the technical, generic, professional and organisational specific knowledge that an individual need in order to perform to the required standard.
Organisational Context	Organisational context includes the way the organisation is structured and how it operates, including the extent of operative knowledge managers have of their relevant areas of responsibility.
Technical Knowledge	Technical knowledge is the specific knowledge needed to accomplish specific designated responsibilities.
Core Skills/ Generic Skills (GS)	Core skills or Generic Skills (GS) are a group of skills that are the key to learning and working in today's world. These skills are typically needed in any work environment in today's world. These skills are typically needed in any work environment. In the context of the OS, these include communication- related skills that are applicable to most job roles.
Electives	Electives are NOS/set of NOS that are identified by the sector as contributive to specialization in a job role. There may be multiple electives within a QP for each specialized job role. Trainees must select at least one elective for the successful completion of a QP with Electives.
Options	Options are NOS/set of NOS that are identified by the sector as additional skills. There may be multiple options within a QP. It is not mandatory to select any of the options to complete a QP with Options.

Acronyms and Abbreviations

AGR	Agriculture
CPCSEA	Committee for the Purpose of Control and Supervision on Experiments on Animals
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