Model Curriculum

QP Name: Marine Capture Fisherman cum Primary Processor

QP Code: AGR/Q5001

Version: 3.0

NSQF Level: 3

Model Curriculum Version: 2.0

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

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Training Parameters

Sector	Agriculture
Sub-Sector	Fisheries
Occupation	Capture Fisheries
Country	India
NSQF Level	3
Aligned to NCO/ISCO/ISIC Code	NCO-2015/6223.0101
Minimum Educational Qualification and Experience	8th grade pass with 1 Year relevant experience OR Grade 8 pass and pursuing continuous schooling in regular school with vocational subject OR 5th grade pass with 4 year relevant experience OR Ability to read and write with 5 year relevant experience OR Previous relevant Qualification of NSQF Level 2 with 1 year of relevant experience
Pre-Requisite License or Training	NA
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	270 Hours

Program Overview

This section summarizes the end objectives of the program along with its duration.

Training Outcomes

At the end of the program, the learner should have acquired the listed knowledge and skills to:

- Demonstrate the process of creating sustainable milk producers' institutions, identifying potential members, conducting meetings and trainings for them
- Demonstrate establishing the milk collection centres, assess the milk production and surplus for the village, identify channels for milk disposal and conduct milk testing and measurement
- Demonstrate planning and mapping of milk routs, conduct surveys create road map, identify transporters and hire vehicles, conduct training for transport staff, record and maintain various documents related to the work
- Describe the concept of clean milk and practices for it, activities for maintaining health, hygiene and sanitation during overall milk production
- Describe health and hygiene requirements at the milk collection centre and practices to maintain it
- Describe the process of milk procurement and transportation system in the village, installing milk collection and testing system, scheduling milk collection and dispatch timing and coding of milk cans, etc.
- Demonstrate assessment of current practices of animal husbandry, feeding, breeding and milk productivity at the village level and conduct productivity enhancement exercises
- Demonstrate milk measurement and testing during transportation, describe measures to handle issues like shortage of milk or milk souring
- Describe the practices for maintaining health, safety and hygiene during the milk transportation and procedure during emergency situations

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	**5:00**	**00:00**	**0:00**	**0:00**	**05:00**
Module 1: Introduction to the role of a Marine Capture Fisherman cum Primary Processor	5:00	0:00	0:00	0:00	0500
AGR/N5001 Prepare for the fishing operation **NOS Version- 2.0** **NSQF Level- 4**	**15:00**	**40:00**	**0:00**	**0:00**	**55:00**
Module 2:Process of preparing for the fishing operation	15:00	40:00	0:00	0:00	55:00

AGR/N5002: Capture the marine fish and maintain the vessel **NOS Version- 2.0** **NSQF Level- 4**	**15:00**	**45:00**	**0:00**	**0:00**	**60:00**
Module 3: Process of capturing the marine fish and maintaining the vessel	15:00	45:00	0:00	0:00	60:00
AGR/N5003 Carry out the post-fishing activities **NOS Version- 2.0** **NSQF Level- 4**	**10:00**	**20:00**	**0:00**	**0:00**	**30:00**
Module 4: Process of carrying out post-fishing activities	10:00	20:00	0:00	0:00	30:00
AGR/N5103: Follow the safety and hygiene practices in capture fisheries operations **NOS Version- 2.0** **NSQF Level- 4**	**15:00**	**15:00**	**0:00**	**0:00**	**30:00**
Module 5: Safety and hygiene practices in capturing fisheries	15:00	15:00	0:00	0:00	30:00
AGR/N5125 Process the fish, prepare and can primary fish products **NOS Version- 1.0** **NSQF Level- 4**	**30:00**	**30:00**	**0:00**	**0:00**	**60:00**
Module 6: Fish processing, preparation and primary fish products	30:00	30:00	0:00	0:00	60:00
DGT/VSQ/N0101 Employability Skills **NOS Version-1.0** **NSQF Level-2**	**30:00**	**00:00**	**0:00**	**0:00**	**30:00**
Module 7: Employability Skills	30:00	00:00	0:00	0:00	30:00
Total Duration	**120:00**	**150:00**	**0:00**	**0:00**	**270:00**

Module Details

Module 1: Introduction to the role of a Marine Capture Fisherman cum Primary Processor
Bridge Module

Terminal Outcomes:

- Discuss the job role of a Marine Capture Fisherman cum Primary Processor.

Duration: **5:00**	Duration: **0:00**
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
- Describe the size and scope of the agriculture industry and its sub-sectors. - State the role and responsibilities of a Marine Capture Fisherman cum Primary Processor. - Identify various employment opportunities for a Marine Capture Fisherman cum Primary Processor.	
Classroom Aids	
Training kit - Trainer guide, presentations, whiteboard, marker, projector, laptop, video films	
Tools, Equipment and Other Requirements	
NA	

Module 2: Process of preparing for the fishing operation

Mapped to AGR/N5001 v2.0

Terminal Outcomes:

- Describe the process of selecting the fish species, fish capture method and equipment.
- Demonstrate the process of preparing the fishing equipment.
- Describe the process of selecting and preparing the fishing vessel.
- Describe the process of checking the weather and obtaining the necessary permit.

Duration: 15:00	Duration: 40:00
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
- Explain the criteria for selecting the fish species to be captured. - Describe the process of selecting an appropriate fish capture method and active or passive fishing gear depending on the species to be captured and duration of the trip. - Describe the process of selecting the appropriate trap net and mesh size according to the species and size of the fish to be captured. - Describe the process of determining the hook size and type of bait according to the fish species to be captured. - List various fishing equipment to be used for capturing fish. - Explain the importance of ensuring the selected vessel and equipment are able to withstand the rough sea conditions. - Explain the criteria for selecting an appropriate mechanised or non-mechanised fishing vessel for the fish capture operation. - Explain the importance of ensuring adequate stock of drinking water, appropriate consumables and fuel on the vessel. - State the applicable arrangements required for hygienic storage of captured fish on the fishing vessel. - State the applicable permit requirements and the relevant	- Demonstrate how to adjust the fishing net according to the selected fishing method and the species to be captured. - Demonstrate the use of the necessary tools, equipment and materials for minor repair and maintenance activities on the vessel.

authority to be contacted for the capture operation.	

Classroom Aids

Training kit - Trainer Guide, Presentations, Whiteboard, Marker, Projector, Laptop, Video Films

Tools, Equipment and Other Requirements

Dissection Box, Thermometer, Lead Line, Sechii Disk, Cut Models Of Petrol Diesel Engines, Working Models Of Inboard And Out Bard Engines, Models Of Traps And Pots, Various Netting Materials Such As Floats, Sinkers, Ropes And Twines, Anchors, Signals Etc. Different Kinds Of Hooks, Minimum One Motorised Boat, Oars, Anchor, Ropes Etc., Small Workshop For Teaching Various Knots, Net Making, Net Mending, Net Rigging, Fabrication Of Traps And Pots.

Module 3: Process of capturing the marine fish and maintaining the vessel
Mapped to AGR/N5002 v2.0

Terminal Outcomes:

- Demonstrate the process of capturing the fish.
- Describe the process of maintaining the quality standards.
- Describe the process of maintaining the vessels.

Duration: 15:00	Duration: 45:00
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
- Explain how to operate mechanised/ non-mechanised fishing vessels. - State the recommended practices to be followed to protect the captured fish from damage while hauling it into the vessel and extracting it from the nets. - State the recommended hygiene standards to be followed to protect the captured fish from contamination, and maintain their quality.	- Demonstrate how to operate the selected fishing vessel to reach the selected fishing ground. - Show how to locate fish shoals using the fish finding equipment. - Demonstrate the process of anchoring the fishing vessel safely at the identified location. - Demonstrate the process of setting up the fishing gear in the water according to the selected fishing method. - Demonstrate how to use the fishing gear appropriately to capture the fish. - Show how to extract the catch from the nets or the line hooks. - Demonstrate the use of dip nets to prevent the escape of small fish. - Demonstrate the process of carrying out minor repair and maintenance of the vessel's engine, fishing gear, and other onboard equipment. - Demonstrate how to clean the deck and fishing gear appropriately using clean water and recommended cleaning material. - Prepare a sample record of repair and maintenance activities.
Classroom Aids	
Training kit - Trainer Guide, Presentations, Whiteboard, Marker, Projector, Laptop, Video Films	
Tools, Equipment and Other Requirements	

Connection/Android Mobile With Access to the Internet, GPS, VHF, Compass, Echo Sounder (Fish Finding Device), Motorised Vessel, Various Types Of Nets And Traps Used In Fishing, Crates Baskets, Shovels, Gloves, Gumboots. Life Jackets, Ring Buoys Etc

Module 4: Process of carrying out post-fishing activities
Mapped to AGR/N5003 v2.0

Terminal Outcomes:

- Describe the process of handling and processing the fish.

Duration: 10:00	Duration: 20:00
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
- State the applicable parameters for sorting and grading the captured fish. - State the applicable hygiene standards to be followed while handling the fish such as Good Manufacturing Practices (GMP) and Sanitation Standard Operating Procedures (SSOP). - State the recommended temperature to store the fish to preserve its quality. - Describe the Hazard Analysis and Critical Control Point (HACCP) method to identify and manage the food safety-related risks while handling and processing the fish. - State the appropriate mode of transport for hygienic shipping of fish to the processing plant or retail buyers.	- Demonstrate how to remove the catch from the fishing equipment, ensuring to protect it from damage. - Demonstrate the process of sorting and grading the catch on the basis of appropriate parameters. - Demonstrate how to perform organoleptic analysis of the catch. - Show how to wash the fish to remove any contaminants and dry it. - Demonstrate how to process the fish as per the buyer's requirements. - Prepare a sample record regarding the processing of fish.
Classroom Aids	
Training kit - Trainer Guide, Presentations, Whiteboard, Marker, Projector, Laptop, Video Films	
Tools, Equipment and Other Requirements	
Well Equips Pre-Processing Shed With Minimum Processing Facility, Cutting Boards, Set Of Knives, Cutting Machine, MAP, Insulated Box, Ice-Making Machines, Thermometer, Plastic Crates, Various Packaging Material, Insulated Boxes, Weighing Balance, Approved Fish Preservatives, Stainless Steel Utensils	

Module 5: Safety and hygiene practices in capturing fisheries
Mapped to AGR/N5103 v2.0

Terminal Outcomes:

- Discuss how to adhere to onboard safe working practices.
- Describe various safety guidelines in water bodies.
- Describe various fish capturing and handling guidelines.

Duration: 15:00	Duration: 15:00
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
- State the relevant regulations to be followed in the marine waters such as Coastal Regulation Zone (CRZ) guidelines. - Describe the process of using the relevant equipment to detect ships/ boats in the vicinity and the appropriate measures to be followed to avoid collisions. - Describe the process of detecting underwater dangers along the fishing route and appropriate measures to be taken to mitigate them. - State the applicable laws related to fishing methods, use of different types of fishing gear, conservation of banned species, disposal of dead/ damaged fish, etc. - Describe the process of identifying poisonous creatures caught with the fish. - State the temperature and hygiene requirements for storing the fish to maintain its freshness.	- Demonstrate how to use fishing machinery and equipment safely following the manufacturer's instructions. - Demonstrate the process of carrying out regular testing and maintenance of the life-saving and firefighting equipment. - Demonstrate the use of life-saving equipment in case of rough weather/ emergencies. - Show how to use the relevant equipment to detect ships/ boats in the vicinity. - Demonstrate the process of detecting underwater dangers along the fishing route. - Demonstrate the process of Safely disposing the poisonous organisms caught with the fish. - Demonstrate the process of handling and cleaning the fish ensuring minimum damage to it.
Classroom Aids	
Training kit - Trainer Guide, Presentations, Whiteboard, Marker, Projector, Laptop, Video Films	
Tools, Equipment and Other Requirements	
Safety Equipment (Personal Floatation Devices Such As Life Jackets Or Lifeboat; Kill Switch; Fire Extinguisher; Rope; Signaling Devices Such As Handheld Flair, Rocket Parachute (Distress Rocket) Or Smoke Signale; Weather Radio, ILR, HRG Unit; Etc.); Life-Saving Appliances Such As SART And EPIRB; Anchor Supporting Equipment (Plow Style, Danforth Anchors, Mushroom Anchor); Personal Protective Equipment: Polarised Sunglasses, Sunscreen Of Required Sun Protection Factor, Foul Weather Gear.	

Module 6: Process of carrying out primary processing and preservation of the harvested fish

Mapped to NOS AGR/N5125 v1.0

Terminal Outcomes:

- Demonstrate the process of processing the fish.
- Demonstrate the process of preparing fish-based products.
- Describe the process of canning, labelling and marketing the fish products.

Duration: 30:00	Duration: 30:00
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
- Explain the applicable hygiene and safety standards GMP, SSOP, GHP and HACCP. - Explain the importance of using tin cans coated with a Sulphur-resistant lacquer to can the fish. - Explain the use of an appropriate liquid medium/ additive such as Brine or double-refined and deodorised vegetable oil to improve the taste, texture and flavour of the fish. - State the recommended temperature for heat processing. - Explain the importance of cooling the heat-processed cans in chlorinated water of potable quality and storing the processed cans in a clean, cool and dry storage.	- Demonstrate the process of carrying out the organoleptic evaluation of the catch. - Show how to freeze/ chill the fish following the recommended hygienic handling practices. - Demonstrate how to de-head the fish and remove the fins as per the Standard Operating Procedure (SOP). - Show how to gut the fish as per the requirement. - Demonstrate the process of washing the fish in distilled water. - Demonstrate the process of carrying out curing of the fish following an appropriate method. - Demonstrate the process of carrying out cold/ hot blanching according to the species and size of the fish. - Demonstrate how to process un-filleted fish/ waste left after filleting through a fish meat bone separator to produce mince. - Demonstrate the use of drum perforations of varying diameter to produce mince of different textures. - Show how to prepare various products using the fish mince. - Demonstrate how to prepare pickles as per the SOP. - Demonstrate the process of preparing ready to eat fish curries.

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	• Demonstrate the process of preparing different sashimi products such as saku, poke, loins, cubes, etc.
	• Demonstrate the use of tin cans to can the fish.
	• Demonstrate the process of carrying out the process of exhausting before sealing the cans to prevent oxidation in the cans.
	• Show how to seal the cans and carry out heat processing of the sealed cans at the recommended temperature.
	• Demonstrate the process of carrying out labelling of the fish products as per the industry standards.
	• Prepare a sample record of the data of processed cans.

Classroom Aids:

Training kit - Trainer Guide, Presentations, Whiteboard, Marker, Projector, Laptop, Video Films

Tools, Equipment and Other Requirements

NA

Module 7: Employability Skills (30 hours)
Mapped to NOS DGT/VSQ/N0101 v1.0

Duration: 30:00
Key Learning Outcomes

Introduction to Employability Skills Duration: 1 Hour

After completing this programme, participants will be able to:

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

Constitutional values - Citizenship Duration: 1 Hour

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

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

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

Basic English Skills Duration: 2 Hours

6. Use appropriate basic English sentences/phrases while speaking

Communication Skills Duration: 4 Hour

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

Diversity & Inclusion Duration: 1 Hour

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

Financial and Legal Literacy Duration: 4 Hours

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

Essential Digital Skills Duration: 3 Hours

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

Entrepreneurship Duration: 7 Hours

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

Customer Service Duration: 4 Hours

17. Differentiate between types of customers
18. Explain the significance of identifying customer needs and addressing them

19. Discuss the significance of maintaining hygiene and dressing appropriately

Getting ready for apprenticeship & Jobs Duration: 2 Hours
20. Create a biodata
21. Use various sources to search and apply for jobs
22. Discuss the significance of dressing up neatly and maintaining hygiene for an interview
23. Discuss how to search and register for apprenticeship opportunities

Annexure

Trainer Requirements

Trainer Prerequisites						
Minimum Educational Qualification	**Specialization**	**Relevant Industry Experience**		**Training Experience**		**Remarks**
		Years	*Specialization*	*Years*	*Specialization*	
Diploma	Regular Diploma more than 15 months in fisheries	3	Marine Fishery Production and management/ Deep Sea Fishing	0		
Graduate	B. Sc. Zoology	3	Marine Fishery Production and management	0		For the school Program minimum qualification of the trainer should be Graduate. Their Teaching experience will be considered industry experience
Graduate	B. Sc Agriculture / Fisheries	2	Marine Fishery Production and management	0		
Graduate	Bachelor of Fisheries Science/ B.Sc. (Industrial Fish & Fisheries)	0	Marine Fishery Production and management/ Deep Sea Fishing	0		

Trainer Certification	
Domain Certification	**Platform Certification**
Certified for Job Role "**Marine Capture Fisherman Cum Primary Processor**", mapped to QP: "AGR/Q5001, 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*	
Graduation	B.F. Sc	4	In Fisheries Science/ Zoology/ Aquaculture/ Applied aquaculture/ Ocean Engineering/ Marine engineering or related experience and fields	0		Practical skills and knowledge required in Deep sea fishing
Graduation	B. Tech (Ocean/ Marine Engineering and related streams)	4	In Fisheries Science/ Zoology/ Aquaculture/ Applied aquaculture/ Ocean Engineering/ Marine engineering or related experience and fields	0		Practical skills and knowledge required in Deep sea fishing
Graduation	B. Sc (Fisheries and related streams)	5	In Fisheries Science/ Zoology/ Aquaculture/ Applied aquaculture/ Ocean Engineering/ Marine engineering or related experience and fields	0		Practical skills and knowledge required in Deep sea fishing
Post-Graduation	M. Tech (Marine Engineering/ Ocean engineering and related streams)	2	In Fisheries Science/ Zoology/ Aquaculture/ Applied aquaculture/ Ocean Engineering/ Marine engineering or related experience and fields	0		Practical skills and knowledge required in Deep sea fishing
Post-Graduation	M. F. Sc	2	In Fisheries Science/ Zoology/ Aquaculture/ Applied aquaculture/ Ocean Engineering/ Marine engineering or related experience and fields	0		Practical skills and knowledge required in Deep sea fishing

Post-Graduation	M Sc (Fisheries and related streams)	2	In Fisheries Science/ Zoology/ Aquaculture/ Applied aquaculture/ Ocean Engineering/ Marine engineering or related experience and fields	0		Practical skills and knowledge required in Deep sea fishing
PhD	Fisheries Science and related streams	1	In Fisheries Science/ Zoology/ Aquaculture/ Applied aquaculture/ Ocean Engineering/ Marine engineering or related experience and fields	0		Practical skills and knowledge required in Deep sea fishing

Assessor Certification	
Domain Certification	**Platform Certification**
Certified for Job Role "**Marine Capture Fisherman Cum Primary Processor**", mapped to QP: "AGR/Q5001, 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 empanelled AAs, define the test structure for the given job roles to cover the required skills and competencies. Assessment strategy consists of the following:

1. <u>Multiple Choice Questions</u>: 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.

While it is important that an individual has adequate knowledge and skills to perform a specific task, weightage for different aspects of 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 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 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, behavioral 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 in our internal app which is Geotagged. Any deviation with centre address needs to be highlighted to the assessment team on a real-time basis.

Method for assessment documentation, archiving, and Access:

- ASCI has 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
Key Learning	The Key learning outcome is the statement of what a learner needs to know, understand and be able to do in order to achieve the terminal outcomes. A set of key learning outcomes will make up the training outcomes. Training outcome is specified in terms of knowledge, understanding (theory) and skills (practical application).
OJT (M)	On-the-job training (Mandatory); trainees are mandated to complete specified hours of training on-site
OJT (R)	On-the-job training (Recommended); trainees are recommended the specified hours of training on-site
Procedural Knowledge	Procedural knowledge addresses how to do something, or how to perform a
Training Outcome	Training outcome is a statement of what a learner will know, understand and be able to do upon the completion of the training.
Terminal Outcome	The Terminal outcome is a statement of what a learner will know, understand and be able to do upon the completion of a module. A set of terminal outcomes help to achieve the training outcome.

Acronyms and Abbreviations

Term	Description
AGR	Agriculture
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