



# Model Curriculum

**QP Name: Organic Grower**

**QP Code: AGR/Q1201**

**QP Version: 3.0**

**NSQF Level: 4**

**Model Curriculum Version: 2.0**

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## Training Parameters

|   |  |
|---|--|
| <b>Sector</b>   | Agriculture  |
| <b>Sub-Sector</b>                                       | Agriculture Crop Production  |
| <b>Occupation</b>                                       | Farm Management  |
| <b>Country</b>  | India  |
| <b>NSQF Level</b>                                       | 4  |
| <b>Aligned to NCO/ISCO/ISIC Code</b>                    | NCO-2015/6111  |
| <b>Minimum Educational Qualification and Experience</b> | 10th Class with 2 years of relevant experience<br>OR<br>10th Class Pass and pursuing continuous regular schooling<br>OR<br>Certificate-NSQF Level-4<br>(Vermicompost Producer) with 6<br>Months of relevant experience<br>OR<br>Previous relevant qualification of NSQF Level 3 with minimum<br>education as 5th grade pass with 2 Years of relevant experience<br>OR<br>5th Class with 6 Year of experience in crop/horticulture<br>cultivation |
| <b>Pre-Requisite License or Training</b>                | NA   |
| <b>Minimum Job Entry Age</b>                            | 16 Years   |
| <b>Last Reviewed On</b>                                 | 17/11/2022   |
| <b>Next Review Date</b>                                 | 27/01/2025   |
| <b>NSQC Approval Date</b>                               | 27/01/2022   |
| <b>QP Version</b>                                       | 3.0  |
| <b>Model Curriculum Creation Date</b>                   | 27/01/2022   |
| <b>Model Curriculum Valid Up to Date</b>                | 27/01/2025   |
| <b>Model Curriculum Version</b>                         | 2.0  |
| <b>Minimum Duration of the Course</b>                   | 390 Hours  |
| <b>Maximum Duration of the Course</b>                   | 390 Hours  |

## Program Overview

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

### Training Outcomes

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

- Produce Organic Crops: Plan for Organic farming, Crops selection, resources, procurement of inputs, cropping pattern, schedule etc.
- Grow and manage crop: Crop cultivation under organic farming, inter cultural operations – organic farming, Pest and disease management, irrigation, weed control etc.
- Maintain the quality of the produce (as prescribed in standards): Harvesting, Post harvesting, Quality assurance and Certification
- Undertake business of Organic farming: arrangement of finance, pooling of resources, market linkages etc.
- Practice collective farming/activity: create PGs/ FIGs/ SHGs, prepare for the PG/ FIG/ SHG operations, conduct group meetings and training sessions, carry out collective farming/ activities
- Communicate effectively at the workplace
- Demonstrate various practices to maintain personal hygiene, cleanliness, and safety at the 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 |
|--|-----------------|--------------------|--|--|----------------|
| <b>AGR/N1201: Undertake planning for organic farming NOS Version-2.0 NSQF Level- 4</b>                       | 15:00           | 15:00              | 0:00                                     | 00:00                                      | 30:00          |
| Module 1: Introduction to the role of an Organic Grower  | 05:00           | 00:00              | 0:00                                     | 0:00                                       | 05:00          |
| Module 2: Planning for organic farming   | 10:00           | 15:00              | 0:00                                     | 0:00                                       | 25:00          |
| <b>AGR/N1202: Carry out seed selection and treatment under organic farming NOS Version-2.0 NSQF Level- 4</b> | 10:00           | 20:00              | 0:00                                     | 0:00                                       | 30:00          |
| Module 3: Process of seed selection and treatment under organic farming                                      | 10:00           | 20:00              | 0:00                                     | 0:00                                       | 30:00          |
| <b>AGR/N1203: Carry out soil</b>   | 15:00           | 15:00              | 0:00                                     | 0:00                                       | 30:00          |

|  |              |              |             |             |              |
|--|--------------|--------------|-------------|-------------|--------------|
| <b>nutrient management under organic farming<br/>NOS Version-2.0<br/>NSQF Level- 4</b>                                   |              |              |             |             |              |
| Module 4: Management of soil nutrient under organic farming  | 15:00        | 15:00        | 0:00        | 0:00        | 30:00        |
| <b>AGR/N1204: Carry out weed management in an organic farm<br/>NOS Version-2.0<br/>NSQF Level- 4</b>                     | <b>05:00</b> | <b>10:00</b> | <b>0:00</b> | <b>0:00</b> | <b>15:00</b> |
| Module 5: Weed management in an organic farm   | 05:00        | 10:00        | 0:00        | 0:00        | 15:00        |
| <b>AGR/N1205: Carry out irrigation management in an organic farm<br/>NOS Version-2.0<br/>NSQF Level- 4</b>               | <b>05:00</b> | <b>10:00</b> | <b>0:00</b> | <b>0:00</b> | <b>15:00</b> |
| Module 6: Irrigation management in an organic farm   | 05:00        | 10:00        | 0:00        | 0:00        | 15:00        |
| <b>AGR/N1206: Integrated pest and disease management in an organic farm<br/>NOS Version-2.0<br/>NSQF Level- 4</b>        | <b>10:00</b> | <b>20:00</b> | <b>0:00</b> | <b>0:00</b> | <b>30:00</b> |
| Module 7: Integrated pest and disease management in an organic farm  | 10:00        | 20:00        | 0:00        | 0:00        | 30:00        |
| <b>AGR/N1207: Carry out harvest and post-harvest management in an organic farm<br/>NOS Version-2.0<br/>NSQF Level- 4</b> | <b>10:00</b> | <b>20:00</b> | <b>0:00</b> | <b>0:00</b> | <b>30:00</b> |
| Module 8: Harvest and post-harvest management in an organic farm   | 10:00        | 20:00        | 0:00        | 0:00        | 30:00        |
| <b>AGR/N1208: Undertake quality assurance and certification in organic farming<br/>NOS Version-2.0<br/>NSQF Level- 4</b> | <b>15:00</b> | <b>15:00</b> | <b>0:00</b> | <b>0:00</b> | <b>30:00</b> |
| Module 9: Quality assurance and certification in organic farming   | 15:00        | 15:00        | 0:00        | 0:00        | 30:00        |

|   |               |               |              |             |               |
|---|---------------|---------------|--------------|-------------|---------------|
| <b>AGR/N1209 - Undertake business of Organic farming<br/>NOS Version-2.0<br/>NSQF Level- 4</b>    | <b>15:00</b>  | <b>15:00</b>  | <b>0:00</b>  | <b>0:00</b> | <b>30:00</b>  |
| Module 10: Organic farming business   | 15:00         | 15:00         | 0:00         | 0:00        | 30:00         |
| <b>AGR/N9903 Maintain health and safety at the workplace<br/>NOS Version-4.0<br/>NSQF Level-4</b> | <b>20:00</b>  | <b>10:00</b>  | <b>0:00</b>  | <b>0:00</b> | <b>30:00</b>  |
| Module 11: Hygiene and cleanliness  | 03:00         | 3:00          | 0:00         | 0:00        | 06:00         |
| Module 12: Safety and emergency procedures  | 17:00         | 07:00         | 0:00         | 0:00        | 24:00         |
| <b>DGT/VSQ/N0102 Employability Skills<br/>NOS Version-1.0<br/>NSQF Level-4</b>                    | <b>60:00</b>  | <b>00:00</b>  | <b>0:00</b>  | <b>0:00</b> | <b>60:00</b>  |
| Module 13: Employability Skills   | 60:00         | 00:00         | 0:00         | 0:00        | 60:00         |
| <b>Module 14: On-the-job Training (mandatory)</b>   | <b>0:00</b>   | <b>0:00</b>   | <b>60:00</b> | <b>0:00</b> | <b>60:00</b>  |
| <b>Total Duration</b>   | <b>180:00</b> | <b>150:00</b> | <b>60:00</b> | <b>0:00</b> | <b>390:00</b> |

# Module Details

## Module 1: Introduction to the role of an Organic Grower

*Bridge Module, Mapped to NOS AGR/N1201 v2.0*

### Terminal Outcomes:

- Discuss the role and responsibilities of an Organic Grower

| <b>Duration: 05:00</b>   | <b>Duration: 0:00</b>                    |
|--|--|
| <b>Theory – Key Learning Outcomes</b>  | <b>Practical – Key Learning Outcomes</b> |
| <ul style="list-style-type: none"> <li>● Discuss general discipline in the classroom (Do's &amp; Don'ts)</li> <li>● Discuss the role of an Organic Grower and their progression pathways</li> <li>● Describe the scope and opportunities of organic farming</li> <li>● Explain the need of organic farming in India</li> <li>● Explain various regulatory mechanism in Organic farming and their role</li> </ul> |  |
| <b>Classroom Aids:</b>   |  |
| Training Kit - Trainer Guide, Presentations, Whiteboard, Marker, Projector, Laptop   |  |
| <b>Tools, Equipment and Other Requirements</b>   |  |
| NA   |  |



## Module 2: Planning for organic farming

*Mapped to NOS AGR/N1201 v2.0*

### Terminal Outcomes:

- Plan the organic farming practices and assessing safe farming practices
- Explain requirements for transition to organic farming
- Plan diversification of crop portfolio

| <b>Duration: 10:00</b>  | <b>Duration: 15:00</b>  |
|---|---|
| <b>Theory – Key Learning Outcomes</b>   | <b>Practical – Key Learning Outcomes</b>  |
| <ul style="list-style-type: none"> <li>● Discuss the need of safe farming practices and their characteristics</li> <li>● Describe the approach to be taken for transition to organic farming</li> <li>● Explain agro-ecology based farming and their advantages and disadvantages along with their pre-requisites</li> <li>● Discuss the effects of specific chemicals on health and environment</li> <li>● List the steps needed to implement organic principles and their pre-requisites as per standard</li> <li>● Discuss about seasonality of various crops</li> <li>● Explain crop rotation and combination of crops for crop rotation</li> <li>● Distinguish between conventional and organic farming</li> <li>● Discuss various forms of organic farming and applicable core principles and recommended package of practices</li> <li>● Explain the characteristics of Good Agricultural Practices (GAP), natural farming, organic farming, zero till farming</li> <li>● Explain the benefits and trade-offs in organic farming</li> <li>● Explain the benefits for multiple</li> </ul> | <ul style="list-style-type: none"> <li>● Demonstrate the detrimental effects of unsafe farming practices on health and environment</li> <li>● Select the crop and its variety for cultivation</li> <li>● Analyze the process of transition to organic farming in term of financial, agronomic, human resources, prevailing regulation etc.</li> <li>● Select the crops for multiple cropping</li> <li>● Estimate budget for inputs required for cultivation practices</li> <li>● Prepare the crop portfolios – multi crop, feasible crop</li> <li>● Demonstrate effective implementation of multi-crop projects</li> <li>● Prepare yearly plan / crop schedule</li> <li>● Framing crop rotating and identifying the crops for rotation</li> <li>● Demonstrate different type of farming</li> <li>● Demonstrate how to identify seasonal stress on various types of crops</li> </ul> |



|  |  |
|--|--|
| <p>cropping</p> <ul style="list-style-type: none"><li>● Explain basic financial planning to get breakeven in organic farming</li><li>● Explain crop vulnerability in organic farming</li></ul> |  |
| <b>Classroom Aids:</b>   |  |
| Training Kit - Trainer Guide, Presentations, Whiteboard, Marker, Projector, Laptop   |  |
| <b>Tools, Equipment and Other Requirements</b>   |  |
| Record Keeping Book, Receipts, Voucher, Case studies and news articles relevant to organic farming   |  |

## Module 3: Process of seed selection and treatment under organic farming

*Mapped to NOS AGR/N1202 v2.0*

### Terminal Outcomes:

- Demonstrate selection of main crop and companion crop as per field requirements
- Demonstrate selection of the seed for organic farming and treat the seed by suitable method

| <b>Duration: 10:00</b>   | <b>Duration: 20:00</b>   |
|--|--|
| <b>Theory – Key Learning Outcomes</b>  | <b>Practical – Key Learning Outcomes</b>   |
| <ul style="list-style-type: none"> <li>● Explain different type of types of cropping system and their pros and cons</li> <li>● Discuss the organic practices for seed treatment</li> <li>● List various seed treatment inputs available for organic farming and their benefits</li> <li>● Explain acceptable chemical alternatives for seed treatment, their procurement and use</li> <li>● Explain methodology for preparation of inputs for carrying out treatment under organic farming</li> <li>● Describe quantity of process of applying seed treatment</li> <li>● Explain the demand of various varieties in the market</li> <li>● Discuss about the resistance of varieties to pests and diseases</li> <li>● Discuss about various characteristics of seed with their suitability to the agro-climatic conditions</li> <li>● Explain various seed treatment techniques in different crops</li> </ul> | <ul style="list-style-type: none"> <li>● Identify main crop and companion crop depending upon the agro-ecological conditions</li> <li>● Plan for intercrop, mixed crop, relay crop, trap crop etc.</li> <li>● Plan for crop rotation cycle to maintain nutrient balance in the soil</li> <li>● Prepare crop schedule to be followed</li> <li>● Select the seed variety which should be – insect pest resistant, non-genetically modified etc.</li> <li>● Identify appropriate and recommended inputs/material to be used for organic seed treatment and their authentic procurement sources</li> <li>● Treat the seed/planting material with bio-inputs</li> <li>● Use organic methods of seed treatments like 'Beejamrit'</li> <li>● Prepare the of inputs for seed treatment</li> <li>● Implement the seed treatment appropriately</li> <li>● Implement the plan for sowing or planting methodology</li> </ul> |
| <b>Classroom Aids:</b>   |  |
| Training Kit - Trainer Guide, Presentations, Whiteboard, Marker, Projector, Laptop   |  |
| <b>Tools, Equipment and Other Requirements</b>   |  |
| Bio Inputs, Bio Fertilizers, different types of seeds, bio-botanicals and pesticides preparation charts with pictures  |  |

## Module 4: Management of soil nutrient under organic farming

*Mapped to NOS AGR/N1203 v2.0*

### Terminal Outcomes:

- Demonstrate management of the soil nutrients by organic methods
- Show how to carry out soil activation and soil enhancement activities in the field

| Duration: 15:00   | Duration: 15:00  |
|---|--|
| Theory – Key Learning Outcomes  | Practical – Key Learning Outcomes  |
| <ul style="list-style-type: none"> <li>● Explain soil physio-chemical and biological properties and their inter-relationship</li> <li>● Describe the concept of soil nutrient management under organic farming</li> <li>● Explain the soil activation and soil enhancement</li> <li>● Describe proper application process and schedule for soil activating agents</li> <li>● Describe various methods to prepare the land to get appropriate tilth</li> <li>● Discuss the importance of top soil in organic cultivation</li> <li>● Describe about various soil activating inputs (jeevamrit, farmyard manure etc.)</li> <li>● Explain about the management of crop residues</li> <li>● Discuss authorised soil and water lab to get the soil sample tested</li> <li>● Explain importance of soil testing reports</li> <li>● Describe various deficiency symptoms and their management under organic farming</li> <li>● Explain how to calculate the nutrient needs on the basis of the soil test report</li> <li>● Explain soil salinity/alkalinity/acidity management options under organic farming</li> </ul> | <ul style="list-style-type: none"> <li>● Demonstrate how to identify various methods of activating microbial activity in top soil and their effective method of application</li> <li>● Demonstrate preparation of various organic inputs that can increase soil microbial activity</li> <li>● Demonstrate how to perform operations of soil testing, soil amendment, manuring, crop selection, land preparation, green manure crop, farm yard manure, use of bio mass, vermicompost, vermiwash, implementation of soil enhancement methods, protocol preparation for basal dose application and top dressing</li> <li>● Show usage of ‘waste decomposer’ for managing the residues of previous crop in the soil</li> <li>● Demonstrate preparation of vermicompost and vermiwash</li> <li>● Show preparation of dung-urine slurry</li> <li>● Demonstrate protocols to be followed for basal dose application and top-dressing</li> <li>● Demonstrate various methods adopted in organic farming for building organic matter in soil</li> <li>● Demonstrate interpretation of the details mentioned in the Soil Health Card and calculation of nutrient needs based on test report and local</li> </ul> |

- Discuss the importance of using bio fertilizers in organic farming
- Explain methods of application, timing and doses of different inputs
- Explain production methodologies for different types of composts and other inputs
- Discuss about green manuring and mulch and its importance
- Explain different methods of conservation agriculture (tillage, residue management, mulching etc.)
- Describe the different sources of organic inputs
- Explain green manuring and biomass recycling methods and strategies
- Describe quality of biomass and stage of harvesting of biomass
- Explain use of biofertilizers in organic agriculture
- Explain types and quantity of inputs needed at different crop stages

crop recommendations

- Demonstrate methods of application, timing and doses of different inputs
- prepare nutrient packages with available resources

#### Classroom Aids:

Training Kit - Trainer Guide, Presentations, Whiteboard, Marker, Projector, Laptop

#### Tools, Equipment and Other Requirements

Bio Fertilizers, Soil Testing Tools/Equipment, FYM, Compost Etc.

## Module 5: Weed management in an organic farm

*Mapped to NOS AGR/N1204 v2.0*

### Terminal Outcomes:

- Explain weed characteristic for their identification
- Demonstrate organic control measures of the weeds in the farm

| <b>Duration: 05:00</b>   | <b>Duration: 10:00</b>   |
|--|--|
| <b>Theory – Key Learning Outcomes</b>  | <b>Practical – Key Learning Outcomes</b>   |
| <ul style="list-style-type: none"> <li>● List the various types of weed in the farm and their impact on crop production and quality</li> <li>● Explain the use of different methods to control weeds and their advantages and disadvantages</li> <li>● Describe types of weed in the crop as against the critical growth stage of the crop and also their control measures</li> <li>● Discuss integrated weed management</li> <li>● Explain standards regarding plant quarantine</li> <li>● Describe bio-pesticides and their recommended dose, method of applications and advantages and disadvantages</li> </ul> | <ul style="list-style-type: none"> <li>● Demonstrate how to identify the different weeds in the field and their characteristics</li> <li>● Demonstrate various methods weed control adopted in integrated weed management</li> <li>● Demonstrate methods of undertaking mechanical/manual weeding process at appropriate time to avoid crop damage</li> <li>● Demonstrate use of appropriate mulching sheets for cultivation</li> <li>● Demonstrate use bio-herbicides for weed control wherever feasible</li> <li>● Demonstrate use of various mechanized weed control equipment for controlling weeds</li> </ul> |
| <b>Classroom Aids:</b>   |  |
| Training Kit - Trainer Guide, Presentations, Whiteboard, Marker, Projector, Laptop   |  |
| <b>Tools, Equipment and Other Requirements</b>   |  |
| Plough, Bio-herbicides,  |  |

## Module 6: Irrigation management in an organic farm

*Mapped to NOS AGR/N1205 v2.0*

### Terminal Outcomes:

- Explain various type of irrigation methods suitable for the farm
- Demonstrate management of the irrigation systems for proper irrigation in organic farming

| <b>Duration: 05:00</b>   | <b>Duration: 10:00</b>   |
|--|--|
| <b>Theory – Key Learning Outcomes</b>  | <b>Practical – Key Learning Outcomes</b>   |
| <ul style="list-style-type: none"> <li>● Explain the timing and method of irrigation appropriate for a given soil type and climatic conditions</li> <li>● Describe advantages and disadvantages of different types of irrigation system</li> <li>● Explain importance of water sample testing</li> <li>● Discuss authorized source of water sample testing</li> <li>● Explain about the micro irrigation techniques and list various types of micro irrigation equipment to be used (mistifiers, drippers, sprinklers, foggers, etc.)</li> <li>● Discuss the optimum moisture level required for the farm</li> <li>● Explain water requirement at various life stages of the crop</li> <li>● Explain quantity of water required for the specific crop and its effect on its yield</li> <li>● Discuss frequency of irrigation required at various stages of plant growth</li> <li>● Explain about water use efficiency in relation to crop production</li> <li>● Discuss common practices of conserving electricity/energy to optimize their usage</li> </ul> | <ul style="list-style-type: none"> <li>● Demonstrate characteristics of good irrigation system and usage of specific applicable irrigation methods to be adopted</li> <li>● Demonstrate use of various type of irrigation system suitable for the selected organic farm</li> <li>● Show application of the micro irrigation techniques in the farm</li> <li>● Demonstrate various tools/equipment required for micro irrigation</li> <li>● Demonstrate technique of maintaining the optimum moisture level required for the farm</li> <li>● Show how to identify disease due to increase in moisture/water content and measures to be taken to control them</li> <li>● Demonstrate methods to plug spills/leakages in irrigation system</li> <li>● Demonstrate various measures undertaken for optimum water use efficiency</li> </ul> |
| <b>Classroom Aids:</b>   |  |
| Training Kit - Trainer Guide, Presentations, Whiteboard, Marker, Projector, Laptop   |  |
| <b>Tools, Equipment and Other Requirements</b>   |  |
| Micro Irrigation Tools/Equipment   |  |

## Module 7: Integrated pest and disease management in an organic farm

*Mapped to NOS AGR/N1206 v2.0*

### Terminal Outcomes:

- Explain characteristics and symptoms of pests and diseases damaging the crop
- Demonstrate various preventive and curative methods for pest and disease management
- Perform Integrated pest and disease management in organic farm

| <b>Duration: 10:00</b>   | <b>Duration: 20:00</b>   |
|--|--|
| <b>Theory – Key Learning Outcomes</b>  | <b>Practical – Key Learning Outcomes</b>   |
| <ul style="list-style-type: none"> <li>● Explain different type of pest and diseases for the related crop along with their diagnostic symptoms and characteristics</li> <li>● Describe seasonal infestation /incidence/ severity of pest and diseases</li> <li>● Explain mode of transmission of diseases</li> <li>● List mixed cropping techniques and trap crops for pests</li> <li>● Explain the use of suitable resistant varieties</li> <li>● Discuss about natural enemies of pests</li> <li>● Describe various mechanical control (traps, sticky plates etc.)</li> <li>● Describe the advantages of biological control of insects, pest and diseases</li> <li>● Explain bio-pesticides, preparation and application</li> <li>● List the tools and equipment used in plant protection</li> <li>● Explain integrated pest and diseases management</li> <li>● List the beneficial insects and natural enemies and their importance</li> <li>● Explain preparation of different types of bio-pesticides at farm with</li> </ul> | <ul style="list-style-type: none"> <li>● Show how to identify the pests that infests the selected crop</li> <li>● Demonstrate the symptoms of various diseases in the crop</li> <li>● Demonstrate infestation /incidence/ severity of pest and diseases</li> <li>● Demonstrate crop stages and disease incidence and also preparation of disease calendar</li> <li>● Demonstrate various mode of transmissions of disease and their control measure</li> <li>● Demonstrate pruning of diseases affected plants safely</li> <li>● Demonstrate deep ploughing in field to keep field clean and for destroying infested plant debris and field sanitation</li> <li>● Demonstrate how to perform mulching</li> <li>● Demonstrate use of various types of traps and their utilizations</li> <li>● Show use of resistant varieties, crop rotation, inter crop, border crop, trap crops, intercultural operations, natural enemies of pest, beneficial insects, bio-insecticides, etc. for pest and disease management</li> <li>● Demonstrate preparation, proper storage and application of different</li> </ul> |



|   |   |
|---|---|
| <p>available farm resources</p> <ul style="list-style-type: none"> <li>● Explain use various botanical extracts for different types of pest and diseases</li> <li>● Explain mechanical/manual weeding methods and their importance in pest and disease control</li> <li>● Explain methods of managing crop residues especially the pest infected plant parts along with weeds and alternate hosts</li> <li>● Explain the importance of health safety and hygiene requirements while application of pest and disease control measure</li> <li>● Describe importance of documentation and record keeping related to pest and disease control</li> </ul> | <p>bio-pesticides at farm</p> <ul style="list-style-type: none"> <li>● Demonstrate preparation of disease calendar</li> </ul> |
| <p><b>Classroom Aids:</b></p>   |   |
| <p>Training Kit - Trainer Guide, Presentations, Whiteboard, Marker, Projector, Laptop</p>   |   |
| <p><b>Tools, Equipment and Other Requirements</b></p>   |   |
| <p>Traps, sticky plates, different bio pesticides, charts of beneficial insects, botanical extracts, Sprayer</p>  |   |

## Module 8: Harvest and post-harvest management in an organic farm

*Mapped to NOS AGR/N1207 v2.0*

### Terminal Outcomes:

- Demonstrate ideal time of crop harvest and suitable harvesting activities
- Manage and perform suitable post-harvest activities

| <b>Duration: 10:00</b>  | <b>Duration: 20:00</b>  |
|---|---|
| <b>Theory – Key Learning Outcomes</b>   | <b>Practical – Key Learning Outcomes</b>  |
| <ul style="list-style-type: none"> <li>● Discuss about ideal time of harvest (climatic conditions, distance from the market)</li> <li>● Describe the physical admixture during harvesting</li> <li>● Explain methods and handling of harvested crops</li> <li>● Describe post-harvest management practices like grading, storage, organically acceptable fumigation, cold storage, packaging and marketing</li> <li>● Discuss about the ideal storage condition (temperature, moisture, etc.)</li> <li>● Discuss about low cost storage methods</li> <li>● Explain proper harvesting methods</li> <li>● Discuss about harvesting maturity index of various crops</li> <li>● List the tools used for harvesting, sorting and grading</li> <li>● List types of packaging material used for different produce</li> <li>● Discuss prevailing market rate of various organic produce</li> <li>● Discuss the opportunities to sell the produce directly in market or to the processing unit</li> <li>● Explain about applicable organic processing technologies</li> <li>● Describe type, kind and scale of value-addition possibilities for the</li> </ul> | <ul style="list-style-type: none"> <li>● Demonstrate method of harvesting the crop after analysing: Crop maturity, moisture content during harvesting, etc.</li> <li>● Demonstrate how to perform post-harvest management practices like grading, storage, organically acceptable fumigation, cold storage, packaging and marketing</li> <li>● Demonstrate use of organically acceptable fumigation systems during storage</li> <li>● Demonstrate cold storage facility required for storage of harvested crop</li> <li>● Demonstrate various packaging as per the requirement of the client/buyer</li> <li>● Demonstrate suitable logistic arrangement for organic produce as detailed by the client/buyer</li> <li>● Demonstrate carry out value-addition of the produce</li> <li>● Demonstrate segregation of waste into different categories and their safe disposal</li> </ul> |

produce

- Discuss about storage, various storage structures and different low cost storage methods
- Explain suitable logistic and supply chain for the organic produce
- Explain about waste management and methods of waste disposal methods
- Explain ways of efficiently managing inputs including water and electricity in the process

**Classroom Aids:**

Training Kit - Trainer Guide, Presentations, Whiteboard, Marker, Projector, Laptop

**Tools, Equipment and Other Requirements**

Charts with different quality parameters, different packaging materials, produce with different grades for visual observation and understanding

## Module 9: Quality assurance and certification in organic farming

*Mapped to NOS AGR/N1208 v2.0*

### Terminal Outcomes:

- Explain Third Party Certification (TPC) process and Participatory Guarantee System (PGS)
- Perform the documentation work required for quality assurance and certification in organic farming
- Explain various risk management practices in compliance of standards related to organic farming
- Demonstrate various documentation requirements for the sale of organic produce and traceability

| <b>Duration: 15:00</b>   | <b>Duration: 15:00</b>   |
|--|--|
| <b>Theory – Key Learning Outcomes</b>  | <b>Practical – Key Learning Outcomes</b>   |
| <ul style="list-style-type: none"> <li>● Discuss different types of certification and their procedures and timelines available for organic produce</li> <li>● Explain the third party certification process</li> <li>● Discuss organic standards in every aspect of farming, production and sell of the produce</li> <li>● Discuss about the risk management in compliance of standards</li> <li>● Discuss the procedure of risk assessment</li> <li>● Discuss tools and equipment's and good agriculture practices that is to be adopted to prevent contamination</li> <li>● Explain the importance of documentation of risk management initiatives</li> <li>● Explain about participatory guarantee system and their basic requirements for for PGS group formation, registration process in the portal and documentation requirements</li> <li>● Explain importance of maintaining</li> </ul> | <ul style="list-style-type: none"> <li>● Demonstrate preparation of various documentation requirements in third party and PGS certification</li> <li>● Demonstrate process of carrying out quality checks for obtaining and maintaining certification</li> <li>● Demonstrate how to maintain detailed farm history and current farm set-up</li> <li>● Demonstrate registration and application submission for Third Party Certification and their payment process for the same</li> <li>● Demonstrate preparation of annual production plan</li> <li>● Demonstrate compliance requirements by the certification bodies</li> <li>● Demonstrate the records that need to maintained related to farming and marketing</li> <li>● Show preparation of documents needed for sale of organic produce and traceability</li> <li>● Demonstrate how to maintain internal inspection sheets and peer appraisals</li> </ul> |

|   |  |
|---|--|
| <p>field/ farm diary, internal inspection sheets and peer appraisals</p> <ul style="list-style-type: none"> <li>● Explain about National standards on organic production (NSOP)</li> <li>● Discuss about organic standards framed by BIS</li> <li>● Describe the need for organic certification</li> <li>● List the various online certification platforms</li> <li>● Explain the procedure for applying TPC and PGS</li> <li>● Discuss benefits and limitations of TPC and PGS</li> <li>● Discuss the benefits and limitations of TPC and PGS</li> <li>● Explain process of certification and traceability of the produce</li> <li>● Explain the standards and norms of storage and packaging (FSSAI, Agmark, Jaivik Bharat logo etc.)</li> <li>● Discuss various types of farming and marketing records</li> <li>● Explain various documentation and external audit requirement for organic farming</li> <li>● Explain various government interventions/initiatives dealing with quality assurance and certification</li> </ul> | <ul style="list-style-type: none"> <li>● Submit season end summary sheet with certification decisions to Regional Council and revision of decision if required in PGS</li> <li>● Demonstrate scope certificate issued by issuing authority</li> <li>● Demonstrate various documents maintained for traceability</li> </ul> |
| <p><b>Classroom Aids:</b></p>   |  |
| <p>Training Kit - Trainer Guide, Presentations, Whiteboard, Marker, Projector, Laptop</p>   |  |
| <p><b>Tools, Equipment and Other Requirements</b></p>   |  |
| <p>Desktop with internet connectivity and sample documents</p>  |  |

## Module 10: Organic farming business

Mapped to NOS AGR/N1209 v2.0

### Terminal Outcomes:

- Explain economics of organic Farming
- Manage business operations in organic farming
- Show how to connect market and access market intelligence

| Duration: 12:00   | Duration: 28:00   |
|---|---|
| Theory – Key Learning Outcomes  | Practical – Key Learning Outcomes   |
| <ul style="list-style-type: none"> <li>● Describe economics of organic farming</li> <li>● Explain basic accounting terms in organic farming</li> <li>● Describe target consumer based on socio-economic classification (SEC) segmentation</li> <li>● Describe breakeven analysis of organic farm business</li> <li>● Explain the various government subsidies and benefits available for organic farming</li> <li>● Discuss about the market/revenue trends and consumers' choices</li> <li>● Explain cost-benefit analysis of a phased organic farming plan</li> <li>● Explain market intelligence based strategy modifications</li> <li>● Describe relevant regulations related to marketing and sale of the organic produce</li> <li>● Explain the role of FPOs and cooperatives in selling organic products</li> <li>● Explain about SWOT analysis</li> <li>● Explain about Segmentation, Targeting and positioning</li> <li>● List the various channels of trading the produce and their benefits</li> <li>● Explain major branding methods of organic produce and their advantages</li> <li>● Explain farm level value addition possibilities</li> <li>● List the major retailers, wholesalers, exporters, processing facilities, co-operatives, bulk buyer and online marketplaces for organic produce</li> <li>● Describe practice for direct marketing of produce and selling the products by forming</li> </ul> | <ul style="list-style-type: none"> <li>● Demonstrate methods/process of assessing the cost and revenue trends in organic farming</li> <li>● Demonstrate cost-benefit analysis of a phased organic farming plan</li> <li>● Demonstrate use of various online market intelligence tools</li> <li>● Show how to access market intelligence and demand for organic produce and plan accordingly electronically or manually</li> <li>● Demonstrate various ways to build consumer awareness on the speciality of the produce</li> <li>● Demonstrate pre-requests for organizing local haats for marketing of produce</li> <li>● Exhibit information on quality and benefits of organic foods</li> <li>● Exemplify the way to convince consumers to register for regular supplies</li> <li>● Demonstration preparation of SWOT analysis</li> <li>● Demonstrate methods of operating various trading channels</li> </ul> |

|  |  |
|--|--|
| <p>FPOs and cooperative societies</p> <ul style="list-style-type: none"><li>● Explain consumer awareness and consumer expectation and satisfaction</li><li>● Explain the concepts of basic demand and supply</li><li>● Explain various channels of trading the produce, including e-trading platforms, and their margin of profit</li><li>● Discuss export opportunity of organic produce and relevant standard to be maintained for the same</li><li>● Elaborate long term planning for connecting with the consumers and various channels for disseminating the benefits of organic food</li></ul> |  |
| <b>Classroom Aids:</b>   |  |
| Training Kit - Trainer Guide, Presentations, Whiteboard, Marker, Projector, Laptop   |  |
| <b>Tools, Equipment and Other Requirements</b>   |  |
|  |  |



## Module 11: Hygiene and cleanliness

*Mapped to NOS AGR/N9903 v4.0*

### Terminal Outcomes:

- Discuss how to adhere to personal hygiene practices.
- Demonstrate ways to ensure cleanliness around the workplace.

| <b>Duration: 03:00</b>  | <b>Duration: 03:00</b>   |
|---|--|
| <b>Theory – Key Learning Outcomes</b>   | <b>Practical – Key Learning Outcomes</b>   |
| <ul style="list-style-type: none"> <li>• Explain the requirements of personal health, hygiene and fitness at work.</li> <li>• Describe common health-related guidelines laid down by the organizations/ Government at the workplace.</li> <li>• Explain the importance of good housekeeping at the workplace.</li> <li>• Explain the importance of informing the designated authority on personal health issues related to injuries and infectious diseases.</li> </ul> | <ul style="list-style-type: none"> <li>• Demonstrate personal hygiene practices to be followed at the workplace.</li> <li>• Demonstrate the correct way of washing hands using soap and water, and alcohol-based hand rubs.</li> <li>• Demonstrate the steps to follow to put on and take off a mask safely.</li> <li>• Show how to sanitize and disinfect one's work area regularly.</li> <li>• Demonstrate adherence to the workplace sanitization norms.</li> <li>• Show how to ensure cleanliness of the work area.</li> </ul> |
| <b>Classroom Aids:</b>  |  |
| Computer, Projection Equipment, PowerPoint Presentation and Software, Facilitator's Guide, Participant's Handbook.  |  |
| <b>Tools, Equipment and Other Requirements</b>  |  |
| Personal Protective Equipment, Cleaning Equipment and Materials, Sanitizer, Soap, Mask  |  |

## Module 12: Safety and emergency procedures

*Mapped to NOS AGR/N9903 v4.0*

### Terminal Outcomes:

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

| <b>Duration: 17:00</b>   | <b>Duration: 07:00</b>  |
|--|---|
| <b>Theory – Key Learning Outcomes</b>  | <b>Practical – Key Learning Outcomes</b>  |
| <ul style="list-style-type: none"> <li>● List the PPE required at the workplace.</li> <li>● Describe the commonly reported hazards at the workplace.</li> <li>● Describe the hazards caused due to chemicals/pesticides/fumigants.</li> <li>● Describe the basic safety checks to be done before the operation of any equipment/machinery.</li> <li>● Describe the common first aid procedures to be followed in case of emergencies.</li> <li>● State measures that can be taken to prevent accidents and damage s at the workplace.</li> <li>● Explain the importance of reporting details of first aid administered, to the reporting officer/doctor, in accordance with workplace procedures.</li> <li>● State common health and safety guidelines to be followed at the workplace.</li> </ul> | <ul style="list-style-type: none"> <li>● Check various areas of the workplace for leakages, water-logging, pests, fire, etc.</li> <li>● Demonstrate how to safely use the PPE and implements as applicable to the workplace.</li> <li>● Display the correct way of donning, doffing and discarding PPE such as face masks, hand gloves, face shields, PPE suits, etc.</li> <li>● Sanitize the tools, equipment and machinery properly.</li> <li>● Demonstrate the safe disposal of waste.</li> <li>● Demonstrate procedures for dealing with accidents, fires and emergencies.</li> <li>● Demonstrate emergency procedures to the given workplace requirements.</li> <li>● Demonstrate the use of emergency equipment in accordance with manufacturers' specifications and workplace requirements.</li> <li>● Demonstrate the administration of first aid.</li> <li>● Prepare a list of relevant hotline/ emergency numbers.</li> </ul> |
| <b>Classroom Aids:</b>   |   |
| Computer, Projection Equipment, PowerPoint Presentation and Software, Facilitator’s Guide, Participant’s Handbook.   |   |
| <b>Tools, Equipment and Other Requirements</b>   |   |
| Personal Protective Equipment, First Aid Kit, Equipment used in Medical Emergencies.   |   |

## Module 13: 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

## Module 14: On-the-Job Training Duration (Mandatory)

Mapped to AGR/Q1201 v3.0

|  |                            |
|--|----------------------------|
| Mandatory Duration: 60:00  | Recommended Duration: 0:00 |
| Location: On-Site  |                            |
| <p>Terminal Outcomes</p> <ol style="list-style-type: none"><li>1. Select the crop and its variety for cultivation</li><li>2. Prepare crop schedule to be followed</li><li>3. Treat the seed/planting material with bio- inputs/ Beejamrit'</li><li>4. Demonstrate how to perform operations of soil testing, soil amendment, manuring, crop selection, land preparation, green manure crop, farm yard manure, use of bio mass, vermicompost, vermiwash, implementation of soil enhancement methods, protocol preparation for basal dose application and top dressing</li><li>5. Demonstrate various methods adopted in organic farming for building organic matter in soil</li><li>6. Demonstrate methods of undertaking mechanical/manual weeding process at appropriate time to avoid crop damage</li><li>7. Demonstrate various measures undertaken for optimum water use efficiency</li><li>8. Show how to identify the pests that infests the selected crop</li><li>9. Demonstrate how to perform mulching</li><li>10. Demonstrate method of harvesting the crop after analysing: Crop maturity, moisture content during harvesting, etc.</li></ol> |                            |

## Annexure

### Trainer Requirements

| Trainer Prerequisites             |   |                              |                      |                     |                |   |
|-----------------------------------|---|------------------------------|----------------------|---------------------|----------------|---|
| Minimum Educational Qualification | Specialization  | Relevant Industry Experience |                      | Training Experience |                | Remarks   |
|                                   |   | Years                        | Specialization       | Years               | Specialization |   |
| 10th class                        |   | 7                            | Agri Crop Production | 0                   |                | Organic Grower with 7 Years' experience with 10th Pass. Experience certificate issued by BDO/Agriculture Officer/Head of Gram panchayat/Loan disbursing bank or financial institution on official letter Head       |
| 12th Class                        |   | 5                            | Agri Crop Production | 0                   |                | Ex-Service-Man including Ex-Paramilitary personnel: Minimum Qualification is 10+2 with an Honourable Discharge/Pension. SSC would consider a relaxation/waiver of sector specific experience on case to case basis. |
| Diploma                           | Agriculture   | 3                            | Agri Crop Production | 0                   |                |   |
| Graduate                          | Graduate in any stream except Agriculture/ Horticulture/ Forestry | 2                            | Agri Crop Production | 0                   |                | For the school Program minimum qualification of the Trainer should be Graduate (Agriculture / Horticulture / Botany/ Forestry) with minimum 3 years Teaching experience (will be considered industry experience)    |
| Graduate                          | Agriculture / Horticulture/ Forestry                              | 0.5                          | Agri Crop Production | 0                   |                |   |

| Trainer Certification  |  |
|--|--|
| Domain Certification   | Platform Certification   |
| Certified for Job Role " <b>Organic Grower</b> ", mapped to QP: "AGR/Q1201, 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 MEPS guidelines is 80%. |

## Assessor Requirements

| Assessor Prerequisites            |   |                              |   |                                |                |  |
|-----------------------------------|---|------------------------------|---|--------------------------------|----------------|--|
| Minimum Educational Qualification | Specialization  | Relevant Industry Experience |   | Training/Assessment Experience |                | Remarks  |
|                                   |   | Years                        | Specialization  | Years                          | Specialization |  |
| Graduation                        | Agriculture/ Botany/ Forestry/ Horticulture and related streams | 5                            | Agriculture/Forestry/ Horticulture crop production and related experience | 0                              |                | Practical skills and knowledge required in Organic Farming practices |
| Post-Graduation                   | Agronomy/Horticulture/Forestry and related streams              | 2                            | Agriculture/Forestry/ Horticulture crop production and related experience | 0                              |                | Practical skills and knowledge required in Organic Farming practices |
| PhD                               | Agronomy/Horticulture/Forestry and related streams              | 1                            | Agriculture/Forestry/ Horticulture crop production and related experience | 0                              |                | Practical skills and knowledge required in Organic Farming practices |

## Assessor Certification

| Domain Certification   | Platform Certification  |
|--|---|
| <p><b>“Organic Grower”</b>, “AGR/Q1201, v3.0”,<br/>Minimum accepted score is 80%</p> | <p>Certified for the Job Role: “Assessor (Vet and Skills)”,<br/>mapped to the Qualification Pack: “MEP/Q2701, v2.0”,<br/>with a<br/>minimum score of 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 the ground through qualified and ToA certified assessors.

An individual must have adequate knowledge and skills to perform a specific task, weightage for different aspects of the assessment is given as follows:

- Multiple Choice Questions: 20%-30%, depending on the specific QP
- Viva: 20%
- Practical: 50% - 60% (Involves demonstrations of applications and presentations of procedures/tasks and other components)
- Assessment will be carried out by certified assessors through empaneled assessment partners. Based on the results of the assessment; ASCI will certify the learners/candidates

### Testing Environment

Assessments are conducted on laptops, Mobiles and android tablets via both offline and online mode depending on the internet connectivity at the assessment location.

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

- Multilingual assessments (ASCI is conducting the assessments in 13 + languages pan India)
- Rubric driven assessments in Practical/Viva sections and responses recorded accordingly
- All responses, data, records and feedback stored digitally on the cloud
- Advanced auto-proctoring features – photographs, time-stamp, geographic-tagging, toggle- screen/copy-paste disabled, etc.
- Android-based monitoring system
- End to end process from allocation of a batch to final result upload, there is no manual intervention

- Assessment will normally be fixed for a day after the end date of the training / within 7 days of completion of training.
- Assessment will be conducted at the training venue
- The room where assessment is conducted will be set with proper seating arrangements with enough space to curb copying or other unethical activities
- Question bank of theory and practice will be prepared by ASCI /assessment agency and approved ASCI. Only from approved Question Bank assessment agency will prepare the question paper. Theory testing will include multiple-choice questions, pictorial questions, etc. which will test the trainee on his theoretical knowledge of the subject.
- The theory, practical and viva assessments will be carried out on the same day. In case of a greater number of candidates, the number of assessors and venue facilitation be increased and facilitated

| <b>Assessment</b>      |                               |                                |  |
|------------------------|-------------------------------|--------------------------------|--|
| <b>Assessment Type</b> | <b>Formative or Summative</b> | <b>Strategies</b>              | <b>Examples</b>  |
| Theory                 | Summative                     | MCQ/Written exam               | Knowledge of facts related to the job role and functions. Understanding of principles and concepts related to the job role and functions   |
| Practical              | Summative                     | Structured tasks/Demonstration | Practical application /Demonstration /Application tasks  |
| Viva                   | Summative                     | Questioning and Probing        | Mock interviews on the usability of job roles/advantages /importance of adherence to procedures. Viva will be used to gauge trainee's confidence and correct knowledge in handling the job situation |

The question paper pre-loaded in the computer /Tablet and it will be in the language as requested by the training partner.

## Assessment Quality Assurance framework

### Assessment Framework and Design:

Based on the Assessment Criteria, SSC in association with AAs will define the test structure for the given roles to cover the required skills and competencies. ASCI offer a bouquet of tools for multi-dimensional evaluation of candidates covering language, cognitive skills, behavioural traits and domain knowledge.

**Theoretical Knowledge** - Item constructs and types are determined by a theoretical understanding of the testing objectives and published research about the item types and constructs that have shown statistical validity towards measuring the construct. Test item types that have been reported to be coachable are not included. Based on these, items are developed by domain experts. They are provided with comprehensive guidelines of the testing objectives of each question and other quality measures.

**Type** – Questions based on Knowledge Required, Case-based practical scenario questions and automated simulation-based questions.

**Practical Skills** - The practical assessments are developed taking into consideration two aspects: what practical tasks is the candidate expected to perform on the job and what aspects of the job cannot be judged through theoretical assessments. The candidates shall be asked to perform either an entire task or a set of subtasks depending on the nature of the job role

**Type** – Standardized rubrics for evaluation against a set of tasks in a demo/practical task

**Viva Voce** - Those practical tasks which cannot be performed due to time or resource constraints are evaluated through the viva mode. Practical tasks are backed up with Viva for thorough assessment and complete evaluation

**Type** – Procedural questions, dos and don'ts, subjective questions to check the understanding of practical tasks.

The assessor has to go through an orientation program organized by the Assessment Agency. The training would give an overview to the assessors on the overall framework of QP evaluation. The assessor shall be given a NOS and PC level overview of each QP as applicable. The overall structure of assessment and objectivity of the marking scheme will be explained to them. The giving of marks will be driven by an objective framework that will maintain the standardization of the marking scheme.

### Type of Evidence and Evidence Gathering Protocol:

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

- GeoTagging to track ongoing assessment
- AA's coordinator emails the list of documents and evidence (photos and videos) to the assessor one day before the assessment. The list is mentioned below:
  - Signed Attendance sheet
  - Assessor feedback sheet

- Candidate feedback sheet
  - Assessment checklist for assessor
  - Candidate Aadhar/ID card verification
  - Pictures of the classroom, labs to check the availability of adequate equipment's and tool to conduct the training and assessment
  - Pictures and videos of Assessment, training feedback and infrastructure.
- Apart from the Assessor, a Technical assistant is popularly known as Proctor also ensures the proper documentation and they verify each other's tasks.
  - To validate their work on the day of the assessment, regular calls and video calls are done.
  - On-boarding and training of assessor and proctor is done on a timely basis to ensure that the quality of the assessment should be maintained.
  - Training covers the understanding of QP, NSQF level, NOS and assessment structure

### ***Methods of Validation***

- Morning Check (Pre-Assessment): Backend team of AA calls and confirms assessor/technical SPOC event status. Assessor/Technical SPOC are instructed to reach the centre on time by 9:30 AM / as decided with TC and delay should be highlighted to the Training Partner in advance.
- Video Calls: Random video calls are made to the technical SPOC/assessor so as to keep a check on assessment quality and ensure assessment is carried out in a fair and transparent manner
- Aadhar verification of candidates
- Evening Check (Post Assessment): Calls are made to the ground team to ensure the event is over by what time and the documentation is done properly or not.
- TP Calling: To keep a check on malpractices, an independent audit team calls the TP on a recorded line to take confirmation if there was any malpractice activity observed in the assessment on part of the AA/SSC team. If calls are not connected, an email is sent to TP SPOC for taking their confirmation
- Video and Picture Evidence: Backend team collects video and pictures for assessment on a real-time basis and highlights any issue such as students sitting idle/ trainer helping the candidates during the assessment.
- Surprise Visit: Time to time SSC/AA Audit team can visit the assessment location and conduct a surprise audit for the assessment carried out by the ground team.
- Geo Tagging: On the day of the assessment, each technical SPOC is required to login into our internal app which is Geotagged. Any deviation with the centre address needs to be highlighted to the assessment team on a real-time basis.

### ***Method for assessment documentation, archiving, and Access:***

- ASCI have a fully automated result generation process in association with multiple AAs
- Theory, Practical and Viva marks form the basis of the results and encrypted files generated to avoid data manipulation. All responses were captured and stored in the

System with Time-Stamps at the end of AAs and SSC. NOS-wise and PC-wise scores can be generated.

- Maker Checker concept: One person prepares the results and another audit result which is internally approved by AA at first and then gets vetted at the end of SSC
- All softcopies of documents are received from the on-ground tech team over email. The same is downloaded by our internal backend team and saved in Repository. The repository consists of scheme-wise folders. These scheme-wise folders have two job role-specific folders. These specific folders have Year wise and Month wise folders where all documents are saved in Batch specific folders. All Hard copies are filed and stored in the storeroom.

***Result Review & Recheck Mechanism –***

- Time-stamped assessment logs
- Answer/Endorsement sheets for each candidate
- Attendance Sheet
- Feedback Forms: Assessor feedback form, Candidate feedback form, TP feedback form
- The results for each of the candidate shall be stored and available for review (retained for 5 years/ till the conclusion of the project or scheme)

# References

## Glossary

| Term                         | Description   |
|------------------------------|---|
| <b>Declarative Knowledge</b> | 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.   |
| <b>Key Learning Outcome</b>  | 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). |
| <b>OJT (M)</b>               | On-the-job training (Mandatory); trainees are mandated to complete specified hours of training on site  |
| <b>OJT (R)</b>               | On-the-job training (Recommended); trainees are recommended the specified hours of training on site   |
| <b>Procedural Knowledge</b>  | 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.  |
| <b>Training Outcome</b>      | Training outcome is a statement of what a learner will know, understand and be able to do upon the completion of the training.  |
| <b>Terminal Outcome</b>      | 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                              |
| FYM  | Farm Yard Manure                         |
| NOS  | National Occupational Standard (s)       |
| NSQF | National Skills Qualifications Framework |
| OJT  | On-the-job Training                      |
| PwD  | People with Disability                   |
| PPE  | Personal Protective Equipment            |
| QP   | Qualifications Pack                      |