



QUALIFICATION FILE

Forest Nursery Raiser

☒ Short Term Training (STT) ☐ Long Term Training (LTT) ☒ Apprenticeship

☒ Upskilling ☐ Dual/Flexi Qualification ☒ For ToT ☒ For ToA

☒ General ☐ Multi-skill (MS) ☐ Cross Sectoral (CS) ☐ Future Skills ☐ OEM

NCrF/NSQF Level: 4

Submitted By:

Agriculture Skill Council of India

Unit No. 101, First Floor, Greenwoods Plaza, Block 'B', Greenwoods City, Sector 45, Gurugram -122009, Haryana.

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Section 1: Basic Details

1.	Qualification Name	Forest Nursery Raiser																
2.	Sector/s	Agriculture																
3.	Type of Qualification: ☐ New ☒ Revised ☐ Has Electives/Options ☐ OEM	NQR Code & version of existing qualification: 2022/AGR/ASCI/06516 & Version 3.0	Qualification Name of existing/previous version: Forest Nursery Raiser															
4.	a. OEM Name b. Qualification Name (Wherever applicable)	NA																
5.	National Qualification Register (NQR) Code &Version (Will be issued after NSQC approval)	QG-04-AG-03922-2025-V2-ASCI	6. NCrf/NSQF Level: 4															
7.	Award (Certificate/Diploma/Advance Diploma/ Any Other (Wherever applicable specify multiple entry/exits also & provide details in annexure)	Certificate																
8.	Brief Description of the Qualification	A Forest Nursery Raiser sets up and maintains a forest nursery. The person also transplants the raised plants and perform nursery management along with basic accounting and inventory management.																
9.	Eligibility Criteria for Entry for Student/Trainee/Learner/Employee	a. Entry Qualification & Relevant Experience: <table border="1" data-bbox="1034 890 2038 1206"> <thead> <tr> <th>S. No.</th> <th>Academic/Skill Qualification (with Specialization - if applicable)</th> <th>Required Experience (with Specialization - if applicable)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>12th grade pass or equivalent</td> <td></td> </tr> <tr> <td>2</td> <td>10 Grade pass</td> <td>3 years of relevant experience in Agriculture and allied sectors</td> </tr> <tr> <td>3</td> <td>Previous NSQF level 3.5</td> <td>1.5 years of relevant experience in Agriculture and allied sectors</td> </tr> <tr> <td>4</td> <td>Previous NSQF level 3</td> <td>3 years of relevant experience in Agriculture and allied sectors</td> </tr> </tbody> </table> b. Age: NA		S. No.	Academic/Skill Qualification (with Specialization - if applicable)	Required Experience (with Specialization - if applicable)	1	12th grade pass or equivalent		2	10 Grade pass	3 years of relevant experience in Agriculture and allied sectors	3	Previous NSQF level 3.5	1.5 years of relevant experience in Agriculture and allied sectors	4	Previous NSQF level 3	3 years of relevant experience in Agriculture and allied sectors
S. No.	Academic/Skill Qualification (with Specialization - if applicable)	Required Experience (with Specialization - if applicable)																
1	12th grade pass or equivalent																	
2	10 Grade pass	3 years of relevant experience in Agriculture and allied sectors																
3	Previous NSQF level 3.5	1.5 years of relevant experience in Agriculture and allied sectors																
4	Previous NSQF level 3	3 years of relevant experience in Agriculture and allied sectors																

10.	Credits Assigned to this Qualification, Subject to Assessment <i>(as per National Credit Framework (NCrF))</i>	13	11. Common Cost Norm Category (I/II/III) <i>(wherever applicable)</i> : II																				
12.	Any Licensing requirements for Undertaking Training on This Qualification <i>(wherever applicable)</i>	NA																					
13.	Training Duration by Modes of Training Delivery <i>(Specify Total Duration as per selected training delivery modes and as per requirement of the qualification)</i>	☒ Offline ☐ Online ☐ Blended <table border="1"> <thead> <tr> <th>Training Delivery Modes</th> <th>Theory (Hours)</th> <th>Practical (Hours)</th> <th>OJT Mandatory (Hours)</th> <th>OJT Recommended (Hours)</th> <th>Total (Hours)</th> </tr> </thead> <tbody> <tr> <td>Classroom (offline)</td> <td>150</td> <td>120</td> <td>120</td> <td></td> <td>390</td> </tr> <tr> <td>Online</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table> <i>(Refer Blended Learning Annexure for details)</i>				Training Delivery Modes	Theory (Hours)	Practical (Hours)	OJT Mandatory (Hours)	OJT Recommended (Hours)	Total (Hours)	Classroom (offline)	150	120	120		390	Online					
Training Delivery Modes	Theory (Hours)	Practical (Hours)	OJT Mandatory (Hours)	OJT Recommended (Hours)	Total (Hours)																		
Classroom (offline)	150	120	120		390																		
Online																							
14.	Aligned to NCO/ISCO Code/s <i>(if no code is available mention the same)</i>	NCO-2015/6113.0200																					
15.	Progression path after attaining the qualification <i>(Please show Professional and Academic progression)</i>	Forest Nursery Raiser (L4), Forest nursery supervisor (L5)																					
16.	Other Indian languages in which the Qualification & Model Curriculum are being submitted	Hindi																					
17.	Is similar Qualification(s) available on NQR-if yes, justification for this qualification	☐ Yes ☒ No URLs of similar Qualifications:																					
18.	Is the Job Role Amenable to Persons with Disability	☒ Yes ☐ No If "Yes", specify applicable type of Disability: SHI																					
19.	How Participation of Women will be Encouraged	Batches specific to women will be formed																					
20.	Are Greening/ Environment Sustainability Aspects Covered <i>(Specify the NOS/Module which covers it)</i>	☒ Yes ☐ No DGT/VSQ/N0102 (v1.0)																					
21.	Is Qualification Suitable to be Offered in Schools/Colleges	Schools ☒ Yes ☐ No Colleges ☒ Yes ☐ No																					
22.	Name and Contact Details of Submitting / Awarding Body SPOC <i>(In case of CS or MS, provide details of both Lead AB & Supporting ABs)</i>	Name: Ms Purnambica K Email: standards@asci-india.com Website: www.asci-india.com Contact No.: 0124-4670029																					
23.	Final Approval Date by NSQC: 08-05-2025	24. Validity Duration: 3 years post NSQC Approval		25. Next Review Date: 30-04-2028																			

Section 2: Module Summary

NOS/s of Qualifications

(In exceptional cases these could be described as components)

Mandatory NOS/s:

Specify the training duration and assessment criteria at NOS/ Module level. For further details refer curriculum document.

Th.-Theory **Pr.**-Practical **OJT**-On the Job **Man.**-Mandatory Training **Rec.**-Recommended **Proj.**-Project

S. No	NOS/Module Name	NOS/Module Code & Version (if applicable)	Core/Non-Core	NCrF/NS QF Level	Credits as per NCrF	Training Duration (Hours)					Assessment Marks					
						Th.	Pr.	OJT-Man.	OJT-Rec.	Total	Th.	Pr.	Proj.	Viva	Total	Weightage (%) (if applicable)
1	Prepare to set up the forest nursery	AGR/N6112 (v3.0)	Core	4	2	20	40			60	30	40		30	100	20
2	Prepare the nursery bed and infrastructure	AGR/N6113 (v3.0)	Core	4	1	10	20			30	30	40		30	100	15
3	Propagate plants in the forest nursery	AGR/N6114 (v3.0)	Core	4	1	10	20			30	30	40		30	100	15
4	Maintain plants in the forest nursery and transplant them	AGR/N6115 (v3.0)	Core	4	1	10	20			30	30	40		30	100	20
5	Perform marketing and inventory management	AGR/N6116 (v4.0)	Core	4	1	20	10			30	30	40		30	100	20
6	Maintain health and safety at the workplace	AGR/N9903 (v4.0)	Non-Core	4	1	20	10			30	40	25		35	100	5
7	Employability Skills (60 Hours)	DGT/VSQ/N 0102 (v1.0)	Non-Core	4	2	60				60	20	30			50	5
8	OJT (Mandatory)				4			120		120						
Duration (in Hours) / Total Marks					13	150	120	120		390	210	255			650	100

Assessment - Minimum Qualifying Percentage

Please specify **any one** of the following:

Minimum Pass Percentage – Aggregate at qualification level: 70% (Every Trainee should score specified minimum aggregate passing percentage at qualification level to successfully clear the assessment.)

Minimum Pass Percentage – NOS/Module-wise: _____% (Every Trainee should score specified minimum passing percentage in each mandatory and selected elective NOS/Module to successfully clear the assessment.)

Section 3: Training Related

1.	Trainer's Qualification and experience in the relevant sector (in years) <i>(as per NCVET guidelines)</i>	10th Class with 5 years of relevant industry experience in Nursery Management* *Forest Nursery Raiser with 5 Years of experience after 10th pass. Experience certificate issued by BDO/ Agriculture Officer/ Government Organizations/ NGO/ Gram Panchayat/ Corporates on official letterhead OR 12th Class with 4 years of relevant industry experience in Nursery Management** ** 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. OR Diploma in agriculture with 3 years of relevant industry experience in Nursery Management OR Graduate with 2 years of relevant industry experience in Nursery Management*** *** For the School Program minimum qualification of the Trainer should be Graduate. Their Teaching experience will be considered industry experience OR Graduate (Agriculture/ Horticulture/ Botany/Forestry) with 0.5 years of relevant industry experience in Nursery Management
2.	Master Trainer's Qualification and experience in the relevant sector (in years) <i>(as per NCVET guidelines)</i>	5 years of training experience after Graduation with 2 years of relevant industry experience in Nursery Management OR 5 years of training experience after Graduation (Agriculture/ Horticulture/ Botany/Forestry) with 0.5 years of relevant industry experience in Nursery Management
3.	Tools and Equipment Required for Training	☒ Yes ☐ No <i>(If "Yes", details to be provided in Annexure)</i>

4.	In Case of Revised Qualification, Details of Any Upskilling Required for Trainer	NA
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Section 4: Assessment Related

1.	Assessor's Qualification and experience in relevant sector (in years) <i>(as per NCVET guidelines)</i>	B.Sc. (Agriculture/ Botany/ Forestry/ Horticulture and related streams) with 5 years of industry experience in Forestry/ Horticulture and related Experience OR M.Sc. (Botany/ Forestry/ Horticulture/Agroforestry and related streams) with 2 years of industry experience in Forestry/ Horticulture and related Experience OR PhD (Botany/ Forestry/ Horticulture/Agroforestry and related streams) with 1 year of industry experience in Forestry/ Horticulture and related Experience
2.	Proctor's Qualification and experience in relevant sector (in years) <i>(as per NCVET guidelines)</i>	Diploma/Graduate (It is mandatory for a proctor to have technical knowledge/IT knowledge Once a proctor has been on-boarded by any AA, they are oriented about skill ecosystem along with do's and don'ts.)
3.	Lead Assessor's/Proctor's Qualification and experience in relevant sector (in years) <i>(as per NCVET guidelines)</i>	M.Sc. (Botany/ Forestry/ Horticulture/Agroforestry and related streams) with 10 years of industry experience in Forestry/ Horticulture and related Experience
4.	Assessment Mode <i>(Specify the assessment mode)</i>	Offline
5.	Tools and Equipment Required for Assessment	☒ Same as for training ☒ Yes ☐ No <i>(details to be provided in Annexure-if it is different for Assessment)</i>

Section 5: Evidence of the need for the Qualification

Provide Annexure/Supporting documents name.

1.	Latest Skill Gap Study (not older than 2 years) (Yes/No): Yes
2.	Latest Market Research Reports or any other source (not older than 2 years) (Yes/No): No
3.	Government /Industry initiatives/ requirement (Yes/No): No
4.	Number of Industry validation provided: 13
5.	Estimated nos. of persons to be trained and employed: 2000

6.	Evidence of Concurrence/Consultation with Line Ministry/State Departments: Awaited, Letter sent on 09 January 2025 to JS MoAFW and reminder sent on 15 01 2024
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Section 6: Annexure & Supporting Documents Check List

Specify Annexure Name / Supporting document file name

1.	Annexure: NCrf/NSQF level justification based on NCrf level/NSQF descriptors <i>(Mandatory)</i>	Annexure-1
2.	Annexure: List of tools and equipment relevant for qualification <i>(Mandatory, except in case of online course)</i>	Annexure-2
3.	Annexure: Detailed Assessment Criteria <i>(Mandatory)</i>	Annexure-5
4.	Annexure: Assessment Strategy <i>(Mandatory)</i>	Annexure-6
5.	Annexure: Blended Learning <i>(Mandatory, in case selected Mode of delivery is “Blended Learning”)</i>	NA
6.	Annexure: Multiple Entry-Exit Details <i>(Mandatory, in case qualification has multiple Entry-Exit)</i>	NA
7.	Annexure: Acronym and Glossary <i>(Optional)</i>	
8.	Supporting Document: Model Curriculum <i>(Mandatory – Public view)</i>	Annexure-7
9.	Supporting Document: Career Progression <i>(Mandatory - Public view)</i>	Forest Nursery Raiser (L4), Forest nursery supervisor (L5)
10.	Supporting Document: Occupational Map <i>(Mandatory)</i>	Annexure-8
11.	Supporting Document: Assessment SOP <i>(Mandatory)</i>	Annexure-9
12.	Any other document you wish to submit:	

Annexure 1: Evidence of Level

NCrf/NSQF Level Descriptors	Key requirements of the job role/ outcome of the qualification	How the job role/ outcomes relate to the NCrf/NSQF level descriptor	NCrf/NSQF Level
Professional Theoretical Knowledge/Process	Select an appropriate site	A Forest Nursery Raiser sets up and maintains a forest nursery. The person also transplants the raised plants	4

	• Select plant varieties and nursery bed • Construct the nursery infrastructure	and perform nursery management along with basic accounting and inventory management.	
Professional and Technical Skills/ Expertise/ Professional Knowledge	• Comply with the applicable regulations • Perform waste management • Manage the inventory • Set the price and connect with the buyers • Accept and process the order • Administer appropriate emergency procedures	The job holder is expected to have knowledge on on relevant government schemes/ assistance offered in the marketing of forest nursery produce, follow the practices recommended as per the regulations governing the collection and trading, identify the potential buyers through different channels, submit the documentary proof of trade license when required, check the demand and market rate for the plants raised in the forest nursery, set a price for the produce as per the guidelines of the market, accept the order from the buyer based on the availability of stock, apply a label with the relevant information, document the quantity and quality of the plants, maintain adequate stock of in-demand plants, maintain the inventory data, segregate waste into different categories, dispose the non-recyclable waste appropriately.	4
Employment Readiness & Entrepreneurship Skills & Mind-set/Professional Skill	• Propagate plants through seeds • Optimise resource utilisation • Perform nutrient management • Perform disease management • Maintain clean and safe workplace • Maintain personal hygiene	The job holder is expected to sort out the damaged/ diseased seeds, prepare potting soil maintaining, treat the seeds using the recommended methods, seeds in the nursery bed/ poly bags/ containers at recommended depth, recommended quantity of water and manure/ fertilizer on the sown seeds, check the plants regularly, apply organic manure/ compost/ bio- fertilizers, apply the necessary growth promoters, arrange for adequate sunlight and shading, select the appropriate treatment such as bio-insecticide/ pesticide/ fungicide to treat the identified insects/ pests/ disease, maintain a clean environment with good air circulation, remove the dead/ diseased plants as per SOP, maintain the record of insecticides/ pesticides/ fungicides used, optimise the usage of water/ electricity/ materials, carry out basic	4

		safety checks before operation of all tools, implements, and machinery and report identified hazards to the supervisor, wear appropriate Personal Protective Equipment (PPE), work in a manner which minimizes environmental damage, follow government/workplace advisories, assess risks prior to performing manual handling jobs.	
Broad Learning Outcomes/Core Skill	• Prepare the nursery layout • Arrange the necessary resources • Prepare the nursery bed • Propagate plants through other propagation methods • Transplant the plants	The job holder is expected to possess knowledge to select an appropriate type of forest nursery to be set up according to the available area, planting stock and irrigation facility, preparation of layout for the nursery considering setting up of mother block, water tank, seedling raising area, compost area, store-room, etc., estimate the cost of purchasing the required inputs, identify multiple vendors of the inputs required for establishing the forest nursery, obtain the necessary details while purchasing the seeds and propagules, ensure the seeds and propagules are free of pests, diseases, examine the soil for an appropriate level of moisture, remove all stumps, roots, debris, weeds and waste material, sterilise the soil through solarisation or by applying the approved chemicals, apply the laboratory-recommended treatment on the soil, prepare sunken/ level/ raised nursery bed with rows and holes, check the plants to identify their maturity indicators, carry the plants to the plantation site while protecting them, transplant the plants at the plantation site under the recommended conditions, maintain the record of plants raised, treat the seeds using the recommended methods, apply the recommended quantity of water and manure/ fertilizer, prepare the poly bags/ containers for sowing the seeds.	4

Responsibility	- Control weed growth - Nursery Management - Inventory Management - Maintenance of nursery	A forest Nursery Raiser is responsible for setting up and maintaining a forest nursery. The person also transplants the raised plants and perform nursery management along with basic accounting and inventory management.	4
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Annexure 2: Tools and Equipment (Lab Set-Up)

List of Tools and Equipment

Batch Size: 30

S. No.	Tool / Equipment Name	Specification	Quantity for specified Batch size
1	Axes	Nos	1
2	Budding and Grafting Knives	Nos	3
3	Budding and Grafting Tape	Nos	5
4	Cutting Pliers	Nos	3
5	Boxes	Nos	3
6	Bamboos splinters	Nos	3
7	Barbed Wire	met	10
8	Enamel Paints	litre	3
9	G.I. net for sieving sand and soil	Kg	5
10	Digging forks	Nos	2
11	Crow bar	Nos	1
12	Hoes	Nos	1
13	Iron Pan	Nos	1
14	Hammer	Nos	1
15	Disc Plough	Nos	1
16	Khurpa	Nos	6
17	Germination trays	Nos	2
18	Hand pruning knives	Nos	2
19	Prismatic Compass	Nos	1

20	Pruning Scissors	Nos	1
21	Shovels	Nos	2
22	Spades (Small & Large)	Nos	2
23	Sprayers	Nos	1
24	Hedge Cutter	Nos	1
25	Shears	Nos	1
26	wire cutters	Nos	1
27	Water Pump	Nos	1
28	Gumboots	Nos	6
29	Rubber gloves	Nos	30
30	Video Recording Equipment	Nos	1
31	Watering cans	Nos	3
32	Face Masks	Nos	30
33	Fertilizer (Organic/ Chemical - As per the need)	Kg	10

Classroom Aids

The aids required to conduct sessions in the classroom are:

1. Whiteboard
2. Markers

Annexure 3: Industry Validations Summary

Provide the summary information of all the industry validations in table. This is not required for OEM qualifications.

S. No	Organization Name	Representative Name	Designation	Contact Address	Contact Phone No	E-mail ID	LinkedIn Profile (if available)
1.	CAAFE	Sumit Srivastava	General Manager	New Delhi	9889990102	info@caafe.in	
2.	Centre for Microfinance	Amit Kumar	Head	Jaipur		amit.kumar@cmfraj.org	
3	Post-Graduation Department of Agriculture	Dr. Randeep Kaur and Dr. Lavleen Kaur	Associate Professor and Assistant Professor	Amritsar	9915305271	lavleenkaur@khalsacollege.edu.in	
4	Agri Joy Private Limited	Priyanshu Jain	Director	Dehradun	79064282293	priyanshu@agrijoy.in	
5	Eco Fast Agri Solution	Shivender Pratap Rathore	Founder & CEO	Bihar	9887720651	ecofastagrisolutions@gmail.com	
6	Jagtap Horticulture Pvt Ltd	Shrinkhala Mahobla	HR Manager	Pune	9011032314	hr@jagtaphorticulture.com	
7	Pathik Agrihorti Solutions pvt. Ltd	Dr Nirmal Kant Sharma	Director	Karnal	7018436769	pagrihortisolutions@gmail.com	
8	Rai Farms and Nursery	Ram Rai	Proprietor	Damtal, Kangra	9888135135		
9	Sam Higginbottom University of Agriculture Technology & Sciences	Dr. Neelam Khore	Professor & Head	Prayagraj	9839588504	neelam.khare@shuats.edu.in	
10	Synergy Tecnofin Private Limited	Abhinav Sharma	HR	Delhi	9870568976	abhinav@synergytech.in	
11	Alpha Advantech LLP	Nitin Lalit	Inventor	Karnal	7015437037	alphaplanter@gmail.com	
12	Amar Singh College	Sanjay Kumar Gupta	Dean Department of Agriculture	Bulandshahr		ascollegelkt@gmail.com	
13	KVA DAV College for Women	Sri Sung	Officiating Principal	Kurukshetra	0184-2252429	kvkdavw@gmail.com	

Annexure 4: Training & Employment Details

Training and Employment Projections:

Year	Total Candidates		Women		People with Disability	
	Estimated Training #	Estimated Employment Opportunities	Estimated Training #	Estimated Employment Opportunities	Estimated Training #	Estimated Employment Opportunities
2025-26	500					
2026-27	500					
2027-28	1000					

Data to be provided year-wise for next 3 years

Training, Assessment, Certification, and Placement Data for previous versions of qualifications:

Qualification Version	Year	Total Candidates				Women				People with Disability			
		Trained	Assessed	Certified	Placed	Trained	Assessed	Certified	Placed	Trained	Assessed	Certified	Placed
3.0	2022-23	53	39	32	0	8	6	3	0	0	0	0	0
3.0	2023-24	400	104	84	0	176	51	45	0	0	0	0	0
3.0	2024-25	1411	966	872	0	212	56	49	0	0	0	0	0

Applicable for revised qualifications only, data to be provided year-wise for past 3 years.

List Schemes in which the previous version of Qualification was implemented:

1. PMKVY
2. Tripura SANKALP Phase II
3. DDUGKY

Content availability for previous versions of qualifications:

☒ Participant Handbook ☒ Facilitator Guide ☐ Digital Content ☐ Qualification Handbook ☐ Any Other:

Languages in which Content is available: Hindi and English

Annexure 5: Detailed Assessment Criteria

Detailed assessment criteria for each NOS/Module are as follows:

NOS/Module Name	Assessment Criteria for Performance Criteria/Learning Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
AGR/N6112: Prepare to set up the forest nursery	<i>Select an appropriate site</i>	12	8		10
	PC1. identify a site that meets the minimum area requirement for setting up a forest nursery and has adequate sunlight exposure				
	PC2. ensure the site is situated near the proposed plantation site and away from sources of industrial wastes, effluents and other pollutants				
	PC3. ensure that setting up a forest nursery at the site is permitted as per the relevant laws and approved sustainable agronomics for agroforestry species				
	PC4. check that the soil at the site is well- drained and aerated and the land has an adequate slope to prevent water-logging				
	PC5. use approved techniques to detect the presence of pathogens in the soil				
	PC6. check that the site has a reliable supply of water, electricity, Labour and other inputs for nursery operations				
	PC7. ensure the site does not experience floods, frost, excessive rains and strong winds				
	<i>Prepare the nursery layout</i>	8	10	-	8
	PC8. select an appropriate type of forest nursery to be set up according to the available area, planting stock to be raised and irrigation facility				
	PC9. measure the available area to prepare the layout of the nursery				
	PC10. prepare a layout for the nursery considering setting up of mother block, water tank, seedling raising area, compost area, store-room, etc.				
	PC11. plan polyculture and multitier planting system as per the available space and conditions				
	PC12. calculate the spacing between plants and rows for their optimum growth				
	<i>Select plant varieties and nursery bed</i>	4	10	-	4
	PC13. select local/ indigenous varieties of plants to be raised for different purposes such as fruit, fuelwood, timber, fodder, avenue plantation etc..				
	PC14. promote the use of native and climate-resilient tree species				
	PC15. select the appropriate type of nursery bed to be prepared such as sunken, level or raised bed				

	PC16. determine the direction of the nursery bed according to the land characteristics				
	<i>Arrange the necessary resources</i>	6	12		8
	PC17. estimate the cost of purchasing the required inputs such as seeds, propagules, fertilizers, pesticides, Personal Protective Equipment (PPE), etc				
	PC18. arrange the funds required for purchasing the inputs				
	PC 19. apply for government grants or subsidies for commercial forest nursery projects				
	PC 20. identify authorised vendors of the inputs required for establishing the forest nursery				
	PC21. select a vendor based on the quality and price of the inputs available with them				
	PC22. purchase the inputs as per the requirement from the selected vendor				
	PC23. obtain the necessary details while purchasing the seeds and propagules such as the local name, family, origin, cultural practices, suitable habitat, etc.				
	PC24. ensure the seeds and propagules are free of pests, diseases and any inert material				
	PC25. check that the root and stem cuttings are uniform in length, diameter and maturity				
	PC26. store the inputs in a safe/clean and dry place to protect them from adverse weather, animals and theft				
	Total Marks	30	40	-	30
	<i>Prepare the nursery bed</i>	12	16		14
	PC1. remove all stumps, roots, debris, weeds and waste material from the land				
	PC2. examine the soil for an appropriate level of moisture for ploughing and hoeing				
	PC3. carry out ploughing and hoeing at the land				
	PC4. irrigate the land with the recommended quantity of water				
	PC5. puddle the land for the recommended duration				
	PC6. level the land and break the soil lumps using a rake				
	PC7. sterilise the soil through solarisation or by applying the approved chemicals to prevent contamination by pests and diseases				

AGR/N6113: Prepare the nursery bed and infrastructure	PC8. co-ordinate with an approved laboratory to test the fertility of the soil				
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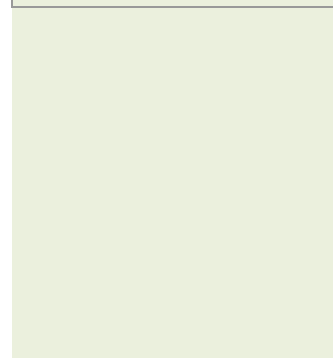
	PC9. apply the laboratory-recommended treatment to the soil such as inorganic fertilisers, peat, lime, bio-culture and manure to improve its fertility				
	PC10. prepare sunken, level or raised nursery bed with rows and holes of the recommended specifications				
	<i>Construct the nursery infrastructure</i>	18	24		16
	PC11. construct the shade net house/ greenhouse/ polyhouse, mist chamber, multi-tier planting, hardening area, mother blocks, irrigation channels, compost area, store-room and other nursery infrastructure as per the layout				
	PC12. install an appropriate micro-irrigation or fertigation system as planned				
	PC13. construct a water harvesting structure for the storage and Conservation of water				
	PC14. arrange for drainage of water from the nursery				
	PC15. erect fences of the recommended height to protect the nursery from external threats such as animals and pests				
	Total Marks	30	40		30
AGR/N6114: Propagate plants in the forest nursery	<i>Propagate plants through seeds</i>	12	8		10
	PC1. sort out the damaged/ diseased seeds				
	PC2. treat the seeds using the recommended methods such as water/ chemical/ mechanical/dry heat treatment				
	PC3. prepare potting soil maintaining the recommended ratio of various soil nutrients				
	PC4. prepare the poly bags/ containers for sowing the seeds/planting vegetative materials by filling them with potting soil				
	PC5. sow seeds in the nursery bed/ poly bags/containers at the recommended depth				
	PC6. apply the recommended quantity of water and manure/ fertilizer on the sown seeds				
	<i>Propagate plants through other propagation methods</i>	8	14		12
	PC7. select other suitable/standard methods for propagating plants in the forest nursery such as grafting//cutting, layering, division and budding				
	PC8. organise the inputs required for propagating the plants as per the selected method				
	PC9. propagate the plants using the selected methods				
	<i>Optimise resource utilisation</i>	10	18		8

	PC10. optimise the usage of fertilizers/water/ electricity/ materials in various tasks/ activities/ processes				
	PC11. connect electrical tools and equipment safely and turn off when not in use				
	PC12. plug water leakages to prevent wastage of water				
	PC13. practice eco-friendly waste management and recycling of nursery materials				
	Total Marks	30	40	-	30
AGR/N6115: Maintain plants in the forest nursery and transplant them	<i>Perform nutrient management</i>	4	6	-	6
	PC1. check the plants regularly for healthy growth and development				
	PC2. water the plants with the recommended quantity of water as per the irrigation schedule				
	PC3. apply organic manure/ compost/ bio- fertilizers in the recommended quantity on time				
	PC4. arrange for adequate sunlight and shading for the optimum growth of plants				
	PC5. identify the signs of slow growth/development in the plants				
	PC6. apply the necessary growth promoters/regulators in the recommended quantity				
	<i>Perform disease management</i>	8	8	-	4
	PC7. monitor the plants regularly in the nursery to identify the signs of insect/ pest/ fungus/ disease infestation				
	PC8. select the appropriate treatment such as bio-insecticide/ pesticide/ fungicide to treat the identified insects/ pests/ disease				
	PC9. apply the selected insecticide/ pesticide/ fungicide to plants as per the prescription, using the relevant PPE to ensure protection from chemical poisoning				
	PC10. maintain a clean environment with good air circulation in the nursery to prevent the growth of pathogens				
	PC11. remove the dead/ diseased plants as per the Standard Operating Procedure (SOP)				
	PC12. maintain the record of insecticides/ pesticides/ fungicides used in the forest nursery				
	<i>Control weed growth</i>	4	6	-	6
	PC13. identify different types of weed growth in the forest nursery				
	PC14. remove weed/off types while protecting the nursery plants				
	PC15. apply mulch on the nursery bed to prevent the growth of weeds				

	PC16. dispose the eliminated weed safely				
	<i>Train and prune the plants</i>	6	8	-	4

	PC17. identify the thinning, training and pruning or any cultural practices needs of the nursery plants				
	PC18. use the recommended tools such as scissor, pruning shears, knife to prune the plants				
	PC19. use the root trainer for supporting and training the roots				
	<i>Transplant the plants</i>	4	6	-	6
	PC20. check the plants to identify their maturity indicators				
	PC21. extract the mature plants using the appropriate tools and equipment				
	PC22. prepare the plants for being carried to the plantation site				
	PC23. carry the plants to the plantation site while protecting them from damage				
	PC24. transplant the plants at the plantation site under the recommended conditions while taking necessary precautions				
	PC25. maintain the record of plants raised and transplanted				
	<i>Perform waste management</i>	4	6	-	4
	PC26. segregate waste into different categories				
	PC27. dispose the non-recyclable waste appropriately				
	PC28. recycle the recyclable waste appropriately				
	Total Marks	30	40	-	30
AGR/N6116: Perform marketing and inventory management	<i>Comply with the applicable schemes and regulations</i>	4	6		6
	PC1. follow the relevant government schemes for the marketing of forest nursery produce				
	PC2. follow the practices recommended as per the regulations governing the collection and trading of agro-forestry produce				
	PC3. ensure compliance with environmental laws and best forestry practices				
	<i>Promote community engagement</i>	4	4		4
	PC4. collaborate with forestry departments, NGOs, and local communities				
	PC5. educate buyers/farmers and communities on tree planting and care				
	PC6. participate in conservation and afforestation projects				
	<i>Set the price and connect with the buyers</i>	10	12		10
	PC7. check the demand/supply and market rate for the plants raised in the forest nursery				

	PC8. set a price for the produce as per the guidelines of the market control/ regulatory body				
	PC9. account for the relevant costs while setting the price such as the cost of planting material, culture practices, storage, transportation/handling charges, etc.				
	PC10. identify the potential buyers through different channels such as panchayat, local contacts, relevant government listings, sale organised by the relevant agencies, etc.				
	PC7. contact the potential buyers to assess their needs and negotiate the price				
	PC8. submit the documentary proof of trade license when required				



	<i>Accept and process the order</i>	6	10		6
	PC13. prepare the plants for dispatch on time as per the order				
	PC14. Carry out labelling with the relevant information such as the plant's name and variety, date and time of harvesting, geographical information, etc.				
	PC15. document the quantity and quality of the plants accurately in the invoice				
	PC16. use an appropriate mode of transport to deliver the plants to the buyer in a safe and hygienic condition				
	PC17. use the buyer-preferred electronic payment method such as BHIM UPI, payment apps, e-wallet for processing payments				
	PC18. maintain the record of sale and payment				
	PC19. calculate the benefit-cost (B:C) ratio				
	<i>Manage the inventory</i>	6	8		4
	PC20. maintain adequate stock of in-demand plants				
	PC21. maintain the record of inputs used in propagating plants and order them in a timely manner to maintain adequate stock				
	PC22. arrange for the safe storage of inputs and propagated plants				
	PC23. maintain the inventory data manually and/ or electronically in the physical registers and/ or the relevant computer application				
	PC24. comply with the relevant regulations in the sale and purchase activities				
	Total Marks	30	40	-	30
AGR/N9903: Maintain health and safety at the workplace	<i>Maintain personal hygiene</i>	10	5		10
	PC1. wash hands, legs and face with soap/alcohol-based sanitizer at reasonable intervals				
	PC2. wash the worn clothes with soap and sun-dry before use next time				
	PC3. ensure the face is covered with mask or three layers of cloth-piece				
	PC4. follow the workplace sanitisation norms including distancing from sick people				
	<i>Maintain clean and safe workplace</i>	15	15		15
	PC5. carry out basic safety checks before operation of all tools, implements, and machinery and report identified hazards to the supervisor				
	PC6. wear appropriate Personal Protective Equipment (PPE) while performing work in accordance with the workplace policy				

	PC7. follow the instructions mentioned on the labels of chemicals/pesticides/fumigants etc. to avoid hazards				
	PC8. assess risks prior to performing manual handling jobs, and work according to currently recommended safe practices				
	PC9. sanitize equipment, tools and machinery before and after use				
	PC10. use equipment and materials safely and correctly and return the same to designated storage after use				
	PC11. dispose waste safely and correctly in the designated area				
	PC12. recognize risks to bystanders and take required action to reduce the risks				
	PC13. work in a manner which minimizes environmental damage, ensuring all procedures and instructions for controlling risks are followed				
	PC14. report any accidents, incidents or problems without delay to an appropriate person and take necessary immediate action to reduce further danger				
	PC15. follow government / workplace advisories in case of outbreak of any disease/disaster				
	<i>Administer appropriate emergency procedures</i>	15	5		10
	PC16. follow procedures for dealing with accidents, fires and emergencies, including communicating location and directions to the location of emergency, as per the workplace requirements				
	PC17. use emergency equipment in accordance with manufacturer's specifications and workplace requirements				
	PC18. provide treatment appropriate to the patient's injuries in accordance with recognized first aid techniques				
	PC19. recover (if practical), clean, inspect/test, refurbish, replace and store the first aid equipment as appropriate				
	PC20. report details of first aid administered in accordance with workplace procedures				
	Total Marks	40	25	-	35
DGT/VSQ/N0102: Employability Skills (60 Hours)	<i>Introduction to Employability Skills</i>	1	1	-	-
	PC1. identify employability skills required for jobs in various industries				
	PC2. identify and explore learning and employability portals				
	<i>Constitutional values – Citizenship</i>	1	1	-	-
	PC3. recognize the significance of constitutional values, including civic rights and duties, citizenship, responsibility towards society etc. and				

	personal values and ethics such as honesty, integrity, caring and respecting others, etc.				
	PC4. follow environmentally sustainable practices				
	<i>Becoming a Professional in the 21st Century</i>	2	4	-	-
	PC5. recognize the significance of 21st Century Skills for employment				
	PC6. practice the 21st Century Skills such as Self- Awareness, Behaviour Skills, time management, critical and adaptive thinking, problem-solving, creative thinking, social and cultural awareness, emotional awareness, learning to learn for continuous learning etc. in personal and professional life				
	<i>Basic English Skills</i>	2	3	-	-
	PC7. use basic English for everyday conversation in different contexts, in person and over the telephone				
	PC8. read and understand routine information, notes, instructions, mails, letters etc. written in English				
	PC9. write short messages, notes, letters, e-mails etc. in English				
	<i>Career Development & Goal Setting</i>	1	2	-	-
	PC10. understand the difference between job and career				
	PC11. prepare a career development plan with short- and long-term goals, based on aptitude				
	<i>Communication Skills</i>	2	2	-	-
	PC12. follow verbal and non-verbal communication etiquette and active listening techniques in various settings				
	PC13. work collaboratively with others in a team				
	<i>Diversity & Inclusion</i>	1	2	-	-
	PC14. communicate and behave appropriately with all genders and PwD				
	PC15. escalate any issues related to sexual harassment at workplace according to POSH Act				
	<i>Financial and Legal Literacy</i>	2	3	-	-
	PC16. select financial institutions, products and services as per requirement				
	PC17. carry out offline and online financial transactions, safely and securely				
	PC18. identify common components of salary and compute income, expenses, taxes, investments etc				

	PC19. identify relevant rights and laws and use legal aids to fight against legal exploitation				
	<i>Essential Digital Skills</i>	3	4	-	-
	PC20. operate digital devices and carry out basic internet operations securely and safely				
	PC21. use e- mail and social media platforms and virtual collaboration tools to work effectively				
	PC22. use basic features of word processor, spreadsheets, and presentations				
	<i>Entrepreneurship</i>	2	3	-	-
	PC23. identify different types of Entrepreneurship and Enterprises and assess opportunities for potential business through research				
	PC24. develop a business plan and a work model, considering the 4Ps of Marketing Product, Price, Place and Promotion				
	PC25. identify sources of funding, anticipate, and mitigate any financial/ legal hurdles for the potential business opportunity				
	<i>Customer Service</i>	1	2	-	-
	PC26. identify different types of customers				
	PC27. identify and respond to customer requests and needs in a professional manner.				
	PC28. follow appropriate hygiene and grooming standards				
	<i>Getting ready for apprenticeship & Jobs</i>	2	3	-	-
	PC29. create a professional Curriculum vitae (Résumé)				
	PC30. search for suitable jobs using reliable offline and online sources such as Employment exchange, recruitment agencies, newspapers etc. and job portals, respectively				
	PC31. apply to identified job openings using offline/online methods as per requirement				
	PC32. answer questions politely, with clarity and confidence, during recruitment and selection				
	PC33. identify apprenticeship opportunities and register for it as per guidelines and requirements				
	Total Marks	20	30		
Grand Total		210	255		185

Annexure 6: Assessment Strategy

This section includes the processes involved in identifying, gathering, and interpreting information to evaluate the Candidate on the required competencies of the program.

1. 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. Multiple Choice Questions : To assess basic knowledge (Objective/Subjective)
2. Viva : To assess awareness on processes (Oral and/or written questioning)
3. Practical : To evaluate skills and identify competencies.(Observation)

Assessments for knowledge and awareness on processes may be conducted through ‘real time’ internet based evaluation or by conducting the same ‘offline’ through TABs. Skills and competencies are to be assessed by conducting ‘practical’ on ground through qualified and ToA certified assessors.

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

Multiple Choice Questions: 20%-30%, depending on the specific QP

Viva: 20%

Practical: 50% - 60% (Involves demonstrations of applications and presentations of procedures/tasks and other components)

Assessment will be carried out by certified assessors through empanelled assessment partners. Based on the results of assessment; ASCI will certify the learners/candidates

2. Testing Environment

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

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

- Multilingual assessments (ASCI is conducting assessments in 13 + languages pan India)
- Rubric driven assessments in Practical/Viva sections and responses recorded accordingly
- All responses, data, records and feedback stored digitally on cloud
- Advanced auto-proctoring features – photographs, time-stamp, geographic-tagging, toggle-screen/copy-paste disabled, etc.
- Android based monitoring system
- End to end process from allocation of a batch to final result upload, there is no manual intervention
- Assessment will normally be fixed for a day after the end date of training / within 7 days of completion of training.
- Assessment will be conducted at the training venue
- Room where assessment is conducted will be set with proper seating arrangements with enough space to curb copying or other unethical activities
- Question bank of theory and practical will be prepared by ASCI /assessment agency and approved ASCI. Only from approved Question Bank assessment agency will prepare the question paper. Theory testing will include multiple choice questions, pictorial question, etc. which will test the trainee on his theoretical knowledge of the subject.
- The theory, practical and viva assessments will be carried out on same day. In case of more number of candidates, number of assessors and venue facilitation be increased and facilitated

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

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

3. Assessment Quality Assurance framework

Assessment Framework and Design:

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

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

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

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

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

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

Type – Procedural questions, do's and don'ts, subjective questions to check understanding of practical tasks.

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

4. Type of Evidence and Evidence Gathering Protocol:

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

- Geo Tagging to track ongoing assessment
- AA's coordinator emails the list of documents and evidences (photos and videos) to the assessor one day prior to the assessment. List is mentioned below:
 - Signed Attendance sheet
 - Assessor feedback sheet
 - Candidate feedback sheet
 - Assessment checklist for assessor
 - Candidate Aadhar/ID card verification
 - Pictures of classroom, labs to check the availability of adequate equipment's and tool to conduct the training and assessment
 - Pictures and videos of Assessment, training feedback and infrastructure.
- Apart from the Assessor, Technical assistant popularly known as Proctor also ensures the proper documentation and they verify each other's

tasks.

- To validate their work on the day of assessment, regular calls and video calls are done.
- On-boarding and training of assessor and proctor is done on timely basis to ensure that quality of the assessment should be maintained.
- Training covers the understanding of QP, NSQF level, NOS and assessment structure

5. *Methods of Validation*

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

Method for assessment documentation, archiving, and Access:

- ASCI has fully automated result generation process in association with multiple AAs
- Theory, Practical and Viva marks forms the basis of the results and encrypted files generated to avoid data manipulation. All responses captured and stored in System with Time-Stamped at the end of AAs and SSC. NOS-wise and PC-wise scores can be generated.
- Maker Checker concept: 1 person prepares results and other audit result which is internally approved by AA at first and then gets vetted at the end of SSC
- All soft copy of documents is received from the on-ground tech team over mail. The same are downloaded by our internal backend team and saved in Repository. The repository consists of scheme wise folders. These scheme wise folders have job role specific folders. These specific folders have Year wise and Month wise folders where all documents are saved in Batch specific folders. All Hard copies are filed and stored in storeroom.
- **Result Review & Recheck Mechanism –**
- Time stamped assessment logs
- Answer/Endorsement sheets for each candidate
- Attendance Sheet
- Feedback Forms: Assessor feedback form, Candidate feedback form, TP feedback form
- The results for each of the candidate shall be stored and available for review (retained for 5 years/ till conclusion of project or scheme)

Annexure: Acronym and Glossary

Acronym

Acronym	Description
AA	Assessment Agency
AB	Awarding Body
ISCO	International Standard Classification of Occupations
NCO	National Classification of Occupations
NCrF	National Credit Framework
NOS	National Occupational Standard(s)
NQR	National Qualification Register
NSQF	National Skills Qualifications Framework
OJT	On the Job Training

Glossary

Term	Description
National Occupational Standards (NOS)	NOS define the measurable performance outcomes required from an individual engaged in a particular task. They list down what an individual performing that task should know and also do.
Qualification	A formal outcome of an assessment and validation process which is obtained when a competent body determines that an individual has achieved learning outcomes to given standards
Qualification File	A Qualification File is a template designed to capture necessary information of a Qualification from the perspective of NSQF compliance. The Qualification File will be normally submitted by the awarding body for the qualification.
Sector	A grouping of professional activities on the basis of their main economic function, product, service or technology.
Long Term Training	Long-term skilling means any vocational training program undertaken for a year and above. https://ncvet.gov.in/sites/default/files/NCVET.pdf