



QUALIFICATION FILE

Junior Parataxonomist

☒ 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: 4.5

Submitted By:

EIACP Cell, Ministry of Environment Forest and Climate Change (MoEFCC)

and

Skill Council for Green Jobs

Chief Executive Officer

CBIP Building, Malcha Marg,

Chanakyapuri, New Delhi – 110021

Contact no. and mail: 9899505533, ceo@sscgj.in

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Section 1: Basic Details

1.	Qualification Name	Junior Parataxonomist																
2.	Sector/s	Forestry																
3.	Type of Qualification: ☒ New ☐ Revised ☐ Has Electives/Options ☐ OEM	NQR Code & version of existing/previous qualification: QG-4.5-ES-04261-2025-V1-SCGJ & Version 1	Qualification Name of existing/previous version: NA															
4.	a. OEM Name b. Qualification Name (Wherever applicable)	NA																
5.	National Qualification Register (NQR) Code & Version	QG-4.5-ES-04261-2025-V1-SCGJ & Version 1	6. NCrf/NSQF Level: 4.5															
7.	Award (Certificate/Diploma/Advance Diploma/ Any Other)	Certificate																
8.	Brief Description of the Qualification	The Junior Parataxonomist supports biodiversity conservation through field-based identification, classification, and documentation of flora and fauna. They contribute to People's Biodiversity Registers, implement the Biological Diversity Act, 2002, support Biodiversity Management Committees, and use GIS tools for conservation planning. With knowledge of national and international biodiversity frameworks, they connect scientific data with local conservation efforts to ensure sustainable bioresource management.																
9.	Eligibility Criteria for Entry for Student/Trainee/Learner/Employee	a. Entry Qualification & Relevant Experience: <table border="1"> <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>Completed 1st year of 3-year/ 4-years UG in Life Science/ Biology Zoology/ Botany</td> <td>NA</td> </tr> <tr> <td>2.</td> <td>12th Grade Pass in science with Biology</td> <td>1.5 year of relevant experience in Field related with Biology/ Life sciences</td> </tr> <tr> <td>3.</td> <td>Previous relevant Qualification of NSQF Level 4</td> <td>1.5 year of relevant experience in Field related with Biology/ life sciences</td> </tr> <tr> <td>4.</td> <td>Previous relevant Qualification of NSQF Level 3.5</td> <td>3 years of relevant experience in Field related with Biology/ life sciences</td> </tr> </tbody> </table>		S. No.	Academic/Skill Qualification (with Specialization - if applicable)	Required Experience (with Specialization - if applicable)	1.	Completed 1st year of 3-year/ 4-years UG in Life Science/ Biology Zoology/ Botany	NA	2.	12th Grade Pass in science with Biology	1.5 year of relevant experience in Field related with Biology/ Life sciences	3.	Previous relevant Qualification of NSQF Level 4	1.5 year of relevant experience in Field related with Biology/ life sciences	4.	Previous relevant Qualification of NSQF Level 3.5	3 years of relevant experience in Field related with Biology/ life sciences
S. No.	Academic/Skill Qualification (with Specialization - if applicable)	Required Experience (with Specialization - if applicable)																
1.	Completed 1st year of 3-year/ 4-years UG in Life Science/ Biology Zoology/ Botany	NA																
2.	12th Grade Pass in science with Biology	1.5 year of relevant experience in Field related with Biology/ Life sciences																
3.	Previous relevant Qualification of NSQF Level 4	1.5 year of relevant experience in Field related with Biology/ life sciences																
4.	Previous relevant Qualification of NSQF Level 3.5	3 years of relevant experience in Field related with Biology/ life sciences																

10	Credits Assigned to this Qualification, Subject to Assessment (as per National Credit Framework (NCrF))	16	11. Common Cost Norm Category: I				
12.	Any Licensing requirements for Undertaking Training on This Qualification (wherever applicable)	NA					
13.	Training Duration by Modes of Training Delivery (Specify Total Duration as per selected training delivery modes and as per requirement of the qualification)	☒ Offline ☐ Online ☐ Blended					
		Training Delivery Modes	Theory (Hours)	Practical (Hours)	OJT Mandatory (Hours)	OJT Recommended (Hours)	Total (Hours)
		Classroom (offline)	245 hours with Employability Skills	155	80		480
		Online					
		(Refer Blended Learning Annexure for details)					
14.	Aligned to NCO/ISCO Code/s (if no code is available mention the same)	NCO-2015/2131 (Biologists, Botanists, Zoologists and related professionals) NCO-2015/2133 (Environmental Protection Professionals) NCO-2015/213 (Life Sciences Professionals)					
15.	Progression path after attaining the qualification (Please show Professional and Academic progression)	Vertical Progression: Senior Parataxonomist					
16.	Other Indian languages in which the Qualification & Model Curriculum are being submitted	English					
17.	Is similar Qualification(s) available on NQR-if yes, justification for this qualification	☐ Yes ☒ No					
18.	Is the Job Role Amenable to Persons with Disability	☐ Yes ☒ No If "Yes", specify applicable type of Disability:					

		☐ Deaf ☐ Hard of Hearing ☐ Acid Attack Victims ☐ Dwarfism
19.	How Participation of Women will be Encouraged	Women would be motivated to participate in this course. Women candidates show interest in life sciences and nature-based courses. This course will motivate women candidates to further pursue their interest in the field of life sciences.
20.	Are Greening/ Environment Sustainability Aspects Covered (Specify the NOS/Module which covers it)	☒ Yes ☐ No All module except employability skills
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 (In case of CS or MS, provide details of both Lead AB & Supporting ABs)	Name: Mr. Arpit Sharma Email: ceo@sscgi.in Contact No.: 9899505533 Website: https://sscgi.in/
23.	Final Approval Date by NSQC: 08-05-2025	24. Validity Duration: 3 years 25. Next Review Date: 07-05-2028

Section 2: Module Summary

S. No	NOS/Module Name	NOS/Module Code & Version (if applicable)	Core/Non-Core	NCrF/NSQF 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.	Explore Floristic Diversity, Endemism, and Economic Botany for Conservation	SGJ/N0703	Core	4.5	1	15	15	-	-	30	53	47	-	-	100	10
2.	Conduct Field Surveys, Collect, Preserve, and Identify Flora	SGJ/N7001	Core	4.5	3	30	30	30		90	50	50	-	-	100	10
3.	Understand Biodiversity in National and International Contexts	SGJ/N7002	Core	4.5	1	30	-	-	-	30	50	0	-	-	50	10
4.	Study and Classify Invertebrates and Vertebrates Using Taxonomy	SGJ/N7003	Core	4.5	3	30	30	30	-	90	50	50	-	-	100	10
5.	Perform Faunal Surveys, Assess Biodiversity, and Apply Conservation Practices	SGJ/N7004	Core	4.5	1	15	15	-	-	30	32	68	-	-	100	10
6.	Implement the Biological Diversity Act, 2002 and Institutional Mechanisms	SGJ/N7005	Core	4.5	1	15	15	-	-	30	60	40	-	-	100	10
7.	Constitute Biodiversity Management Committees and Operate them Effectively	SGJ/N7006	Core	4.5	1	15	15	-	-	30	50	50	-	-	100	10
8.	Document People's Biodiversity Registers and Develop Bioresource Strategies	SGJ/N7007	Core	4.5	2	20	20	20	-	60	76	24	-	-	100	10
9.	Introduce Remote Sensing and GIS Techniques for Conservation Efforts	SGJ/N7008	Core	4.5	1	15	15	-	-	30	51	49	-	-	100	10

S. No	NOS/Module Name	NOS/Module Code & Version (if applicable)	Core/Non-Core	NCrF/NSQF 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)
10.	Employability Skills (ES)	DGT/VSQ/N0102	Non Core	4	2	60	-	-	-	60	20	30	-	-	50	10
Duration (in Hours) / Total Marks					16	245	155	80		480	492	408			900	100

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**Assessment - Minimum Qualifying Percentage****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.)

Section 3: Training Related

1.	Trainer's Qualification and experience in the relevant sector (in years) (as per NCVET guidelines)	M.Sc. (Botany/ Zoology/ Marine Science/ Life Science/ Environmental Science) with 1 year of experience in relevant sector OR Graduate (Botany/ Zoology/ Marine Science/ Life Science/ Environmental Science) with 3 years' experience in relevant sector.
2.	Master Trainer's Qualification and experience in the relevant sector (in years) (as per NCVET guidelines)	Scientists & Research Associates of State Biodiversity Board, Research Scientist/ Professor/ Reader/ Lecturer from Universities having more than 5 years of experience in relevant sector after TOT certification.
3.	Tools and Equipment Required for Training	☒ Yes ☐ No (If "Yes", details to be provided in Annexure)
4.	In Case of Revised Qualification, Details of Any Upskilling Required for Trainer	Not Applicable

Section 4: Assessment Related

1.	Assessor's Qualification and experience in relevant sector (in years) (as per NCVET guidelines)	M.Sc. (Botany/ Zoology/ Marine Science/ Life Science/ Environmental Science) with 2 year of experience in relevant sector OR Graduate (Botany/ Zoology/ Marine Science/ Life Science/ Environmental Science) with 4 years' experience in relevant sector.
2.	Proctor's Qualification and experience in relevant sector (in years) (as per NCVET guidelines)	Scientists & Research Associates of State Biodiversity Board, Research Scientist/ Professor/ Reader/ Lecturer from Universities having more than 6 years of experience in relevant sector after TOT certification.
3.	Lead Assessor's/Proctor's Qualification and experience in relevant sector (in years) (as per NCVET guidelines)	Scientists & Research Associates of State Biodiversity Board, Research Scientist/ Professor/ Reader/ Lecturer from Universities having more than 7 years of experience in relevant sector after TOT certification.
4.	Assessment Mode (Specify the assessment mode)	Online and offline both
5.	Tools and Equipment Required for Assessment	☒ Same as for training ☒ Yes ☐ No (details to be provided in Annexure-if it is different for Assessment)

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 Huge demand for workforce requirement in areas related to Biodiversity conservation, parataxonomy and related field can be directly demonstrated through the following study: The 2020 global spatial targets for protected areas set by the Convention on Biological Diversity have almost been achieved, but management effectiveness remains deficient. Personnel shortages are widely cited as major contributing factors but have not previously been quantified. Using data from 176 countries and territories, we estimate a current maximum of 555,000 terrestrial protected area personnel worldwide (one per 37 km²), including 286,000 rangers (one per 72 km²), far short of published guidance on required densities. Expansion by 2030 to 30% coverage of protected areas and other effective area-based conservation measures is widely agreed as a minimum for safeguarding biodiversity and ecosystem services. We project that effective management of this expanded system will require approximately 3 million personnel (one per 13 km²), including more than 1.5 million rangers or equivalents (one per 26 km²). Appleton, M.R., Courtiol, A., Emerton, L. et al. Protected area personnel and ranger numbers are insufficient to deliver global expectations. Nat Sustain 5, 1100–1110 (2022). https://doi.org/10.1038/s41893-022-00970-0 A research report by M.D. Subhash Chandran, T.V. Ramachandra and Prakash N. Mesta, published by Centre for Ecological Sciences (https://wgbis.ces.iisc.ac.in/energy/lake2012/fullpaper/mds_fullpaper2.pdf). It highlights the huge potential for harnessing the student power for documentation of the immense biodiversity of the country. The identification, various types of living organisms, their role in ecosystem, etc. are pertinent to conserve the biodiversity.
2.	Latest Market Research Reports or any other source (not older than 2 years) (Yes/No): Yes The latest research on GSDP aims to develop skilled manpower for employability and livelihood generations under green skills for short term as well as long term enterprise development. This type of skill development programme sets values and attitudes that an individual needs to develop and promote sustainability, environmental conservation and socio-economic conditions in business, industry and community. (D.S. Mallika & D. Jebasingh Raja, An Empirical study on the Green Skill Development Programme and its inclusiveness in Green Industries for effective Green Marketing and Sustainable Development: Key Success Factors and Challenges, 2022).
3.	Government /Industry initiatives/ requirement (Yes/No): No The course has been developed by Ministry of Environment, Forest and Climate Change
4.	Number of Industry validation provided: 13 Provided in the annexure
5.	Estimated nos. of persons to be trained and employed: 100 candidates* per year (* number of candidates can vary based on fund availability)
6.	Evidence of Concurrence/Consultation with Line Ministry/State Departments: Concurred by Ministry of Environment, Forest and Climate Change (Line Ministry).

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: Evidence of Level
2.	Annexure: List of tools and equipment relevant for qualification <i>(Mandatory, except in case of online course)</i>	Annexure: Tools and Equipment (Lab Set-Up)
3.	Annexure: Detailed Assessment Criteria <i>(Mandatory)</i>	Annexure: Detailed Assessment Criteria (Mandatory)
4.	Annexure: Assessment Strategy <i>(Mandatory)</i>	Annexure: Assessment Strategy
5.	Annexure: Acronym and Glossary <i>(Optional)</i>	Annexure: Acronym and Glossary
6.	Supporting Document: Model Curriculum <i>(Mandatory – Public view)</i>	Attached
7.	Supporting Document: Career Progression <i>(Mandatory - Public view)</i>	Annexure: Career progression and OM
8.	Supporting Document: Occupational Map <i>(Mandatory)</i>	Annexure: Career progression and OM
9.	Supporting Document: Assessment SOP <i>(Mandatory)</i>	Annexure: Assessment Strategy

Annexure 1: Evidence of Level

Title/Name of qualification/component: Junior Parataxonomist			
Level: 4.5			
NSQF Domain	Outcomes of the Qualification/Component	How the outcomes relate to the NSQF level descriptors	NSQF Level
Professional Theoretical Knowledge/ Process	Trainees would get an advanced knowledge of flora, fauna, medicinal plants and wetlands They will be able to identify and document species, and also train others. The Trainees learn different types of wetlands, their properties and importance. They are able to identify economically important plants, Medicinal plants on the field; trainees are able to collect the data on Traditional Knowledge in a particular area. Gaining knowledge about various environmental issues of their region, various laws, rules and regulations of environment, conservation methods, Aichi Targets, Biodiversity laws, IUCN Categories etc.	Para taxonomists would possess an advanced knowledge of biodiversity and its components. They are required to be skilled in their field and would be able to act as master trainers at the end of the course. They would have clear knowledge of rules and regulations, acts and issues in their field.	4.5
Professional and Technical Skills/ Expertise/ Professional Knowledge	The trainees should have hands-on skills in sampling and analytical techniques, interpretation of data generated, etc.	The trainee would have the professional skill to operate all kinds of analytical equipment. They would be able to analyze and present data and generate reports	4.5
Employment Readiness & Entrepreneurship Skills & Mind-set/Professional Skill	Parataxonomists would be able to independently undertake eco restoration of natural habitats, have knowledge of advanced conservation techniques, in situ and ex situ conservations, knowledge of protected areas and biosphere as well as wildlife reserves. Apart from being able to routinely identify various species of flora and fauna, help in conservation, and in maintaining PBRs, they will also be able to become Master trainers in their field. Trainees would be able to assess the Biodiversity, its threat factors, environmental issues, laws, rules and regulations to be implemented in legal protections and in conservation efforts.	Trainees would possess practical skill to conduct conservation and restoration of degraded sites and help local communities to undertake such activities.	4.5

Title/Name of qualification/component: Junior Parataxonomist			
Level: 4.5			
NSQF Domain	Outcomes of the Qualification/Component	How the outcomes relate to the NSQF level descriptors	NSQF Level
Broad Learning Outcomes/Core Skill	In terms of core skills acquired, trainees will gain advanced knowledge of computers, MS Office, GIS, GPS and other software tools for conducting survey and documentation of Biodiversity. They are required to have some working knowledge of English and have personnel skills in order to engage local communities in conservation activities.	As the communication both oral and written will be required to carry out the activities related to conservation, collection of data, survey, documentation of flora and fauna, along with advanced knowledge of computer and English.	4.5
Responsibility	Parataxonomists are able to independently initiate community conservation, protection of local flora and fauna, In-situ conservation of biologically rare species. They are able to stop the illegal cutting, uprooting, felling and trading of the plants, trafficking of animal species listed in the Scheduled List of Wildlife Protection Act, to implement the wetland and other laws strictly, to verify NTFPs Permission is strictly followed or not.	The trainees will be responsible for the data collected and surveys undertaken and also will be responsible for other's works and learning as Master trainers.	4.5

Annexure 2: Tools and Equipment (Lab Set-Up)

List of Tools and Equipment

Batch Size: 20 and 30

S. No.	Tool / Equipment Name	Specification	Quantity for specified Batch 20	Quantity for specified Batch 30
1.	DSLR Camera	As per Industry Specification	4	6
2.	Binoculars	As per Industry Specification	4	6
3.	Microscope	As per Industry Specification	4	6
4.	GPS Device	As per Industry Specification	4	6
5.	Camera traps	As per Industry Specification	2	2
6.	Hand Lens	As per Industry Specification	20	30
7.	Biology box	As per Industry Specification	20	30
8.	Poly Bag or Poly-sheets	As per Industry Specification	50 pcs	50 pcs.
9.	Blotting Papers	As per Industry Specification	200	200

Classroom Aids

The aids required to conduct sessions in the classroom are:

1. Laptop with Internet connection
2. White Board/ Projector, etc.

Annexure 3: Industry Validations Summary

S. No	Organization Name	Representative Name	Designation	Contact Address	Contact Phone No	E-mail ID	LinkedIn Profile (if available)
1	HTWOMINE SOLUTIONS PRIVATE LIMITED	Supriya Tirthkar	Director	Sr no. 21/3B, Ragoba Patil Nagar, Pune, Maharashtra	9.18391E+11	Supriya.tirthkar@gmail.com	
2	VACEN ENGINEERING AND SOLUTIONS PRIVATE LIMITED	Vibhutinath Pandey	Director	H-72-A, Second Floor, Kh No. 80/14, Mahavir Enclave, Palam, New Delhi-1100945	7503208625	vibhuti.vacen@gmail.com	
3	GD Goenka University	Vipul Pandey	AGM	GD Goenka Education City, Sohna Gurugram “ Haryana 122013	9149057199	vipul.pandey@gdgu.org	
4	Heemsol Energy System Pvt Ltd	Dipti Shah	Director	1st Floor Giriraj Complex, Opp. Bank of Baroda, Ahmedabad, Gujarat-380013	-9898167641	dipti@heemenergy.com	
5	GOREnewable Technology	Japen Gor	Managing Partner	214, Devpath Complex, B/H Lal Bungalow, Off C.G. Road, Ahmedabad, Gujarat-380009	-9099064257	japen@gorenwtech.com	
6	TAPSIL JATI ADIBASI PRAKTAN SAINIK KRISHI BIKASH SHILPA KENDRA	Soumen Koley	Secretary	Gentegory, Palashy, Dhaniakhali, Hooghly, West Bengal, 712303	9647690557 / 8860597565	s.n.koley20@gmail.com	
7	Chronic Foundation	Ramesh S	Chairman	No 55, Opp to Shanubhoganahally Lake, Chokkanahalli, Arekere Post, Bangalore North 562163	9845010306	ramesh@chronicfoundation.org	

8	Green Life Solution Pvt. Ltd.	Vikas Deshpande	General Manager - Sales	XI-74/6, Behind Priyadarshini Polytechnic, MIDC, Hingna Road, Nagpur - 440 016	+91 9225332011		
9	Danao Green Tech Private Limited	Dr Sanjay Danao	Director	203, Sai Avenue, D-7, CIDCO Meghdoot, Butibori MIDC, Nagpur - 441122	+91 9545648496	danaogreentech@gmail.com	
10	EVOLT ENERGY SYSTEMS LLP	Sarthak Shukla	Partner	304, Plot No. 4, Aditya Complex, Sector-10, Dwarka, New Delhi, 110075	+91 7073351655	sarthak@e-volt.in	
11	Novace Pvt. Ltd.	Riplav	Director	Anand Cinema, Kabirpur Road, Near Milk Plant, Sonapat, Haryana 131001	+91 7082598980	novaceev@gmail.com	
12	Terra Charge India Pvt. Ltd.	Debayan Das	Network Expansion Head	Stesalit Tower, Block-GP, E-2-3, Sector-V, Salt Lake, West Bengal 700091	8820885275	debayandas@terra-charge.co.in	
13	Nimar Solar	Satyendra Singh Chouhan	Director	305, KB Mall, Sapna Sangeeta Road, Indore (M.P.)-452001	-7000834564	info.nimarsolar@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	200	50	40	10	10	2
2026-27	200	50	40	10	10	2
2027-28	100	20	10	2	5	1

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
-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-

Applicable for revised qualifications only, data to be provided year-wise for past 2 years.

List Schemes in which the previous version of Qualification was implemented: *Not Applicable*

Content availability for previous versions of qualifications:

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

Languages in which Content is available: 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	Practical	Project	Viva
SGJ/N0703: Explore Floristic Diversity, Endemism, and Economic Botany for Conservation	<i>Floristic diversity and Endemism. Economic Botany and Traditional Knowledge and Wildlife (Flora) Protection and Conservation</i>	53	47	-	-
	PC1. Discuss about the Major ecosystems- To observe and analyze different ecosystems and their components in their natural settings	6	-	-	-
	PC2. Discuss the Vegetation types of India, Phytogeographical regions of India- To gain knowledge of various plant groups and phytogeographical regions in India, Biodiversity Hotspots in India and Endemism in Indian Flora with Special Emphasis on Flowering Plants	7	-	-	-
	PC3. Discuss about the useful Plants and Plant Products; Medicinal Plants and Folklore; Folklore and Traditional Indian Medicinal Systems; Indigenous Tribal Communities and Traditional Knowledge (Region-Wise)	5	-	-	-
	PC4. Learn about the flora and conservation practices associated with sacred groves.	6	-	-	-
	PC5. Overview of IUCN Red List	9			
	PC6. Overview of CITES	5	-	-	-
	PC7. Discuss about CITES Implementation	5	-		

PC8. Explain about Non-Detriment Finding (NDF) for Plant Species	5	-		
PC9. Explain about the Identification of Illegally Traded Plant Species Using Pharmacognosy Techniques	3	-		
PC10. Discuss about <i>in situ/ex situ</i> conservation	2	-		
PC11. Understand the economic significance of plants and their products.	-	6		
PC12. Identify key plants used in various industries and their roles	-	7		
PC13. Understand the principles of traditional Indian medicinal systems and their applications.	-	4		
PC14. Documentation of traditional plant knowledge and practices among indigenous communities.	-	6		
PC15. Understand the ecological and cultural importance of sacred groves.	-	6		
PC16. Understand the categories and criteria used to assess the conservation status of plant species.	-	6		
PC17. Identify threatened flora in specific regions and their conservation needs.	-	5		
PC18. Recognize CITES-listed plant species and understand the impact of international trade on their conservation.	-	5		
PC19. Develop skills in identifying and authenticating plant species using scientific techniques.	-	2		

NOS/Module Name	Assessment Criteria for Performance Criteria/Learning Outcomes	Theory	Practical	Project	Viva
SGJ/N7001: Conduct Field Surveys, Collect, Preserve, and Identify Flora	Field surveys, collections, preservation and identification of flora	50	50	-	-
	PC1. Discuss about the morphological characters of Flowering Plants	10	-	-	-
	PC2. Explain the identification Techniques Method of Dissecting Floral Parts and Observation	10	-	-	-
	PC3. Explain the identification Techniques of local plant species using field guides and identification keys.	10	-	-	-
	PC4. Explain to understand and use scientific names	10	-	-	-
	PC5. Discuss about Collection of Plants and Field Data; Method of Pressing, Mounting, and Preservation of Plant Specimens	5	-	-	-
	PC6. Explain the procedure of Incorporation and Curation of Specimens (Herbarium/ Museum)	5	-		
	PC7. Develop a deep understanding of plant morphology and terminology.	-	10		
	PC8. Gain hands-on experience in dissecting, collecting, preserving, and curating plant specimens.	-	10		

PC9. Enhance skills in identifying plants using various botanical resources and keys.	-	10		
PC10. Build practical experience in field data Collection and specimen documentation.	-	10		
PC11. Understand best practices in plant preservation methods.	-	10		

NOS/Module Name	Assessment Criteria for Performance Criteria/Learning Outcomes	Theory	Practical	Project	Viva
SGJ/N7002: Understand Biodiversity in National and International Contexts	<i>Biodiversity- An overview (national and international context)</i>	50	-	-	-
	PC1. Describe the overview of floral and faunal diversity in India as well as in the World.	9	-	-	-
	PC2. Explain about the general classification scheme and the introduction with floral and faunal groups found in India.	7	-	-	-
	PC3. Explain about the Concept of different agro-climatic zones as well as bio-geographic zones and their contribution to the biodiversity richness.	5	-	-	-
	PC4. Explain about the Concept of Wetlands (<i>Amrit Dharohar</i>) and their types.	10	-	-	-
	PC5. Discuss about the Ramsar sites and its faunal diversity in India.	5	-	-	-
	PC6. Explain about the various threats to our biodiversity and its impact on our ecosystem.	5	-	-	-
	PC7. Explain about the sustainable measures towards the habitat restoration.	9	-	-	-

NOS/Module Name	Assessment Criteria for Performance Criteria/Learning Outcomes	Theory	Practical	Project	Viva
SGJ/N7003: Study and Classify Invertebrates and Vertebrates Using Taxonomy	<i>Taxonomy: Invertebrate and Vertebrate</i>	50	50	-	-
	PC1. Describe characteristics, collection and preservation techniques of different invertebrates.	8	-	-	-
	PC2. Explain key concept of different major and minor invertebrate phylums and general classification scheme (Protista, Mesozoa, Porifera, Cnidaria, Ctenophora, Platyhelminthes, Rotifera, Gastrotricha, Kinorhyncha, Nematoda, Acanthocephala, Sipuncula, Annelida, Onychophora, Arthropoda, Phoronida, Bryozoa, Entoprocta, Brachiopoda, Chaetognatha, Tardigrada, Mollusca, Nemertea, Echinodermata and Hemichordata)	7			
	PC3. Describe key concept of different lower chordates.	10			
	PC4. Discuss characteristics and preservation techniques of different vertebrates.	2			
	PC5. Introduce concept of different taxonomic classes of vertebrates (Pisces, Amphibia, Reptilia, Aves, and Mammals)	6	-	-	-
	PC6. Introduce concept of exoskeletal structures like hair/ fur, feathers, horn/antlers.	8	-	-	-
	PC7. Explain concept of bones	9	-	-	-

	PC8. Introduce cataloguing and Database preparation	-	7	-	-
	PC9. Explain maintenance of collections/ museum specimens	-	8	-	-
	PC10. Introduce preparation of slides/ pinning technique.	-	8	-	-
	PC11. Identify Common species for economic/ medical importance/ traditional knowledge.	-	9	-	-
	PC12. Illustrate trichotaxonomy technique.	-	8	-	-
	PC13. Visit to Nature trail/ Visit to zoological garden	-	10	-	-

NOS/Module Name	Assessment Criteria for Performance Criteria/Learning Outcomes	Theory	Practical	Project	Viva
SGJ/N7004: Perform Faunal Surveys, Assess Biodiversity, and Apply Conservation Practices	<i>Faunal survey, assessment, interpretation and conservation practices. Important Acts and Treaties towards Protection of Wildlife in India</i>	32	68	-	-
	PC1. Discuss conceptual idea of different sampling technique and survey/ census methods like transect, quadrat etc.	8	-	-	-
	PC2. Introduce protected Areas and corridors	6	-	-	-
	PC3. Discuss different biodiversity indices	8	-		
	PC4. Introduce <i>in-situ</i> and <i>ex-situ</i> conservation theoretical concept.	10	-		
	PC5. Analyze the ways to protect, conserve and preserve biodiversity	-	6		
	PC6. Inspect ecological requirements and maintaining factors for priority species and ecosystems	-	9		
	PC7. Visit to Nature trail for Survey	-	9		
	PC8. Observe behavior of animals in zoological garden	-	8		
	PC9. Introduction to data documentation and analysis in spread sheet	-	10		
	PC10. Inspect wildlife related judgment in creating new understanding	-	4		

	PC11. Build and apply new ideas, methods, and ways of thinking	-	5		
	PC12. Introduced to field study procedures	-	8		
	PC13. Describe managing Human – Wildlife conflict	-	9		

NOS/Module Name	Assessment Criteria for Performance Criteria/Learning Outcomes	Theory	Practical	Project	Viva
SGJ/N7005: Implement the Biological Diversity Act, 2002 and Institutional Mechanisms	Biological Diversity Act, 2002 and its Institutional Mechanism for Implementation	60	40	-	-
	PC1. Explain about the Key provisions and objectives of the Biological Diversity Act (2002) & Biological Diversity Rule (2004)	10	-	-	-
	PC2. Discuss about the Regulation of Access to Biological Diversity.	10	-	-	-
	PC3. Explain about the National Biodiversity Authority; State Biodiversity Boards (SBBs)/ Union Biodiversity Councils (UBCs) and Biodiversity Management Committees (BMC)	10	-	-	-
	PC4. Describe about the Registration of traders/ companies who are collecting biological resources	20	-	-	-
	PC5. Discuss about the Collection of levy fee from the users of the biological resources	10	-	-	-
	PC6. Introduced to various types of livelihood	-	10	-	-
	PC7. Introduced to hands-on experience of traditional knowledge for sustainable environment like Vermicomposting technology, Aquaculture, Apiculture, Sericulture, Lac-culture and agricultural methods etc.	-	10	-	-
	PC8. Explained about ABS application procedure	-	20	-	-

NOS/Module Name	Assessment Criteria for Performance Criteria/Learning Outcomes	Theory	Practical	Project	Viva
SGJ/N7006: Constitute Biodiversity Management Committees and Operate Them Effectively	Constitution of Biodiversity Management Committee & its operational technique	50	50	-	-
	PC1. Discuss election of Members and establishing administrative setup.	10	-	-	-
	PC2. Discuss about the Management of Biodiversity Heritage Sites and native / Indigenous varieties/ breeds.	10	-	-	-
	PC3. Explain about the Preparation of Local Biodiversity Action Plan	20	-	-	-
	PC4. Explain convergence of BMC with PRI and line departments in particular; Incorporating activities of the BMC in the Gram Panchayat Development Plan	10	-	-	-
	PC5. Introduced to maintenance of records and Registers and convening the meeting of the BMCs	-	10	-	-
	PC6. Explained financial Matters – opening Bank accounts (Local Biodiversity Fund Account) and its maintenance	-	10	-	-
	PC7. Described about the procedure of establishing and managing local seed banks	-	10	-	-
	PC8. Establish nursery for medicinal plants and commercial viable plants	-	20	-	-

NOS/Module Name	Assessment Criteria for Performance Criteria/Learning Outcomes	Theory	Practical	Project	Viva
SGJ/N7007: Document People's Biodiversity Registers and Develop Bioresource Strategies	PBR Documentation & Importance, Bio-resource management and Future strategies	76	24	-	-
	PC1. Understand People's Biodiversity Register	8	-	-	-
	PC2. Describe about the importance of PBR; PBR documentation Process, Methodology and validation	7	-	-	-
	PC3. Explain about the Landscape, Lifescape, Waterscape and Soil types.	8	-	-	-
	PC4. Brief overview on Socio-economy	6	-	-	-
	PC5. Explain about the sustainable use of Biodiversity through Flagship Programmes and Integrated Watershed Management Programme	7	-	-	-
	PC6. Explain about the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA)	9	-	-	-
	PC7. List of Centrally Sponsored Schemes and its Objectives and activities	11	-	-	-
	PC8. Explain about Green Revolution	6	-	-	-
	PC9. Understand bio-resources	6	-	-	-
	PC10. Discuss marketing of bio-resource-based products in India with example	8	-	-	-
	PC11. Field visits and Hands-on experience on PBR preparation of selected locations.	-	4	-	-

	PC12. Introduce to Fauna and Flora documentation (wild as well as domesticated including aquatic - both freshwater and marine).	-	9	-	-
	PC13. Illustrate Map preparation on documented reports.	-	5	-	-
	PC14. Introduce marketing of bio-resources and naturally grown agricultural products	-	6	-	-

NOS/Module Name	Assessment Criteria for Performance Criteria/Learning Outcomes	Theory	Practical	Project	Viva
SGJ/N7008: Introduce Remote Sensing and GIS Techniques for Conservation Efforts	Fundamental of Remote Sensing and Hands on training on GIS for conservation	51	49	-	-
	PC1. Discuss about Conceptual background remote sensing technology.	10	-	-	-
	PC2. Describe vector and raster data as well as grid system.	8	-	-	-
	PC3. Explain about GIS data, system operation and interpretation of results.	6	-		
	PC4. Understand basic GIS concepts, data types, and applications.	9	-		
	PC5. Explain the gain proficiency in using GIS software and tools for spatial data analysis and map creation.	6	-		
	PC6. Discuss about the methods for collecting, inputting, and managing spatial data.	6	-		
	PC7. Develop skills in creating effective maps and visualizations	6	-		
	PC8. Introduced to basic training in preparation of map using open-source software like QGIS.	-	5		
	PC9. Practice with subset data using selections and feature attributes	-	5		
	PC10. Illustrate Data presentation of particular area on the basis of species distribution.	-	4		
	PC11. Introduced to Computer based learning technique	-	10		

	PC12. Visualize spatial data on a map. Add, remove, and organize data layers.	-	5		
	PC13. Introduced to the user interface and basic tools.	-	12		
	PC14. Discuss use of GPS for collecting spatial coordinates in the field.	-	8		

Annexure 6: Blended Learning

Blended Learning Estimated Ratio & Recommended Tools:

Refer NCVET “Guidelines for Blended Learning for Vocational Education, Training & Skilling” available on:

<https://ncvet.gov.in/sites/default/files/Guidelines%20for%20Blended%20Learning%20for%20Vocational%20Education,%20Training%20&%20Skilling.pdf>

S. No.	Select the Components of the Qualification	List Recommended Tools – for all Selected Components	Offline: Online Ratio
1	☒ Theory/ Lectures - Imparting theoretical and conceptual knowledge	DSLR Camera, Video Camera, Polybags, Poly pouches zipper, drying sheets, scicator, pruners, chemicals, GPS, Compass, Torch, Travel equipment, Trekking Backpack, Laboratory bag (Gloves, Forceps, Watch glasses, Glass Slides, Cover slips, Scalpel, Invertebrate pins, Magnifying glass, Poly pouch etc.), Vials, Jars, Cotton, Vernier caliper, Stereo zoom and slide Microscopes, Camera, Spot-scope, Binoculars, Insect net & other traps, Camera traps, Chemical for preservation.	
2	☒ Imparting Soft Skills, Life Skills, and Employability Skills /Mentorship to Learners		
3	☒ Showing Practical Demonstrations to the learners		
4	☒ Imparting Practical Hands-on Skills/ Lab Work/ workshop/ shop floor training		
5	☒ Tutorials/ Assignments/ Drill/ Practice		
6	☒ Proctored Monitoring/ Assessment/ Evaluation/ Examinations		
7	☒ On the Job Training (OJT)/ Project Work Internship/ Apprenticeship Training		

Annexure 7: 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:

- Batches assigned to the assessment agencies for conducting the assessment on SDSM/SID or email
- Assessment agencies send the assessment confirmation to VTP/TC looping SCGJ
- Assessment agency deploys the ToA certified Assessor for executing the assessment
- SCGJ monitors the assessment process & records

2. Testing Environment:

- Confirm that the centre is available at the same address as mentioned on SDMS or SID
- Check the duration of the training.
- Check the Assessment Start and End time to be as 10 a.m. and 5 p.m.
- Check that the allotted time to the candidates to complete Theory & Practical Assessment is correct.
- Check the mode of assessment—Online (TAB/Computer) or Offline (OMR/PP).
- Confirm the number of TABs on the ground are correct to execute the Assessment smoothly.
- Check the availability of the Lab Equipment for the particular Job Role.

3. Assessment Quality Assurance levels / Framework:

- Question papers created by the Subject Matter Experts (SME)
- Question papers created by the SME verified by the other subject Matter Experts
- Questions are mapped with NOS and PC
- Question papers are prepared considering that level 1 to 3 are for the unskilled & semi-skilled individuals, and level 4 and above are for the skilled, supervisor & higher management
- Assessor must be ToA certified & trainer must be ToT Certified
- Assessment agency must follow the assessment guidelines to conduct the assessment

4. Types of evidence or evidence-gathering protocol:

- Time-stamped & geotagged reporting of the assessor from assessment location
- Center photographs with signboards and scheme specific branding
- Biometric or manual attendance sheet (stamped by TP) of the trainees during the training period
- Time-stamped & geotagged assessment (Theory + Viva + Practical) photographs & videos

5. Method of verification or validation:

- Surprise visit to the assessment location
- Random audit of the batch
- Random audit of any candidate

6. Method for assessment documentation, archiving, and access

- Hard copies of the documents are stored
- Soft copies of the documents & photographs of the assessment are uploaded / accessed from Cloud Storage
- Soft copies of the documents & photographs of the assessment are stored in the Hard Drives

On the Job:

OJT Monitoring Report

- As in Green Jobs Sector, reproducing the evidence for assessment is not feasible due to constraints like cost, confidentiality and controlled environment, every
- Apprentice is required to record the evidences performed during the OJT and the same gets authorized by his/her supervisor.
- The evidence recording is done in a structured monitoring report, termed as OJT Monitoring report.
- During the OJT, every trainee is required to fill the OJT monitoring report which is required to be signed by his/her supervisor.
- Towards the end of OJT period these reports are submitted with the HR department of company
- These duly submitted reports are then verified by an Industry nominated assessor for verification of evidence.

Theory, Practical & Viva:

- Scope – Is used to test the knowledge and understanding and skills acquired during the OJT as well as to conform the OJT monitoring report.
- Some personality traits and generic skills (such as – promptness, sharpness, communication skills, depth of knowledge, comprehension, presentation, patience
- etc) can also be tested, which is also required for the QP.
- Tools – The assessment's questions should be aligned with the Qualification Pack, covering the PCs. There will be summative assessment at the end of the OJT.
- Method – Direct questions open and close ended questions, situation-based questions, analytical questions, and decision-making based questions for Viva,
- MCQ for the theory and performing QP related operations for practical. Different questions in theory, practical and viva are included to test relevant PCs from
- the QP
- Analysis – Assessor draws a spectrum of ready answers to be expected from trainee for Viva. This reduces effect of subjectivity of the assessor. Comparative
- Quality of trainees within a batch or different institutes can be gauged. The skill is gauged by observing the practical work.

Execution of OJT Assessment:

- HR department hands over the individual OJT monitoring report with Industry nominated assessor and schedules an assessment meeting for each trainee.
- Industry nominated assessor assesses each trainee based on OJT monitoring report, viva on each PC and also takes into account attendance of each trainee towards the end of the OJT period.
- The OJT marks are compiled for each NOS by the Industry nominated assessor and submitted with HR department of company.
- The OJT assessment results are then sent to SCGJ by HR department of company in a sealed envelope for compiling the assessment results in case of offline assessment.

Annexure 8: 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

Annexure 9: Career Progression and OM

