QUALIFICATION FILE

Manager- Waste Management

☒ **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: 6

Submitted By:

Skill Council for Green Jobs

Chief Executive Officer
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Manager- Waste Management

Section 1: Basic Details

1.	Qualification Name	Manager- Waste Management	
2.	Sector/s	Environmental Science	
3.	Type of Qualification: ☐ New ☒ Revised ☒ Has Electives/Options	NQR Code & version of existing/previous qualification: 2022/WSSWM/SCGJ/05149 & version 2	Qualification Name of existing/previous version: Manager- Waste Management
4.	a. OEM Name b. Qualification Name (Wherever applicable)		
5.	National Qualification Register (NQR) Code &Version	QG-6-ES-01347-2023-V1.1-SCGJ & version 1.1	6. NCrF/NSQF Level: 6
7.	Award (Certificate/Diploma/Advance Diploma/ Any Other	Certificate	
8.	Brief Description of the Qualification	Manager-Waste Management is responsible for carrying out market analysis and formulating business plan for the center. He/she is also responsible for management of overall operation of the concerned center and ensures health and safety at the workplace. In addition, the jobholder ensures compliance of applicable statutory laws, policies and procedures relating to the center. Elective 1: Biomass Depot: Manager-Waste Management specializes in management of overall operations of the biomass depot and associated business including procurement, processing and onward supply. Elective 2: Compost Yard: Manager-Waste Management specializes in management of the compost yard and associated business including production and marketing of urban waste compost. Elective 3: Dry Waste Center: Manager-Waste Management specializes in collection and management of dry waste focusing on plastic, paper and other waste.	

9.	**Eligibility Criteria for Entry for Student/Trainee/Learner/Employee**	a.	**Entry Qualification & Relevant Experience:**

a. **Entry Qualification & Relevant Experience:**

S. No.	Academic/Skill Qualification (with Specialization - if applicable)	Required Experience (with Specialization - if applicable)
1.	Pursuing first year of 2-year PG program after completing 3year UG degree (in relevant field e.g., Agriculture/Environmental Science)	NA
2.	Pursuing PG diploma after 3-year UG degree (in relevant field e.g., Agriculture/Environmental Science).	NA
3.	Completed 4 year UG (in case of 4-year UG with honours/ honours with research, in relevant field e.g., Agriculture/Environmental Science etc).	NA
4.	12th Grade Pass with 2 years of Vocational Education & Training	2 years of relevant experience (e.g. in (Agriculture/Environmental Science).
5.	12th Grade with 1 year NTC plus 1 year NAC/CITS	2 year relevant experience (e.g. in (Agriculture/Environmental Science).
6.	12th grade pass	4 years relevant experience (e.g. in (Agriculture/Environmental Science).

		7.	Previous relevant Qualification of NSQF Level 5 (e.g. Supervisor – Operations and Maintenance Compressed Biogas/Waste to Energy - Level 5)	3 years of relevant experience (e.g. i in (Agriculture/Environmental Science).	
		b.	**Age: 21**		

10	**Credits Assigned to this Qualification, Subject to Assessment** (as per National Credit Framework (NCrF))	20		**10. Common Cost Norm Category:** **I**
11	**Any Licensing requirements for Undertaking Training on This Qualification** (wherever applicable)	NA		

12	**Training Duration by Modes of Training Delivery** (Specify **Total Duration** as per selected training delivery modes and as per requirement of the qualification)	**Minimum Duration:** ☒**Offline** ☐**Online** ☐**Blended**

Minimum Duration:
☒**Offline** ☐**Online** ☐**Blended**

Training Delivery Modes	Theory (Hours)	Practical (Hours)	OJT Mandatory (Hours)	OJT Recommended (Hours)	Total (Hours)
Classroom (offline)	210	150	240	0	600
Online					

(Refer Blended Learning Annexure for details)

Maximum Duration:
☒**Offline** ☐**Online** ☐**Blended**

Training Delivery Modes	Theory (Hours)	Practical (Hours)	OJT Mandatory (Hours)	OJT Recommended (Hours)	Total (Hours)
Classroom (offline)	230	190	240	0	660
Online					

(Refer Blended Learning Annexure for details)

13	**Aligned to NCO/ISCO Code/s** (if no code is available mention the same)	NCO-2015/1324.0102
14	**Progression path after attaining the qualification** (Please show Professional and Academic progression)	Vertical Progression: Plant Head (Operations)-CBG/WTE (Level 7) Horizontal Progression: Feedstock Manager - Procurement and Composition (Level 6)
15	**Other Indian languages in which the Qualification & Model Curriculum are being submitted**	**Nil**
16	**Is similar Qualification(s) available on NQR-if yes, justification for this qualification**	☐ **Yes** ☒ **No**
17	**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**
18	**How Participation of Women will be Encouraged**	The programme would be proposed to be incorporated in women ITIs and diploma colleges to train women candidates on the job role. TPs shall be encouraged to onboard at least a certain number of female candidates in each batch
19	**Are Greening/ Environment Sustainability Aspects Covered** (Specify the NOS/Module which covers it)	☒ **Yes** ☐ **No**

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20	**Is Qualification Suitable to be Offered in Schools/Colleges**	Schools ⊠ Yes ☐ No Colleges ⊠ Yes ☐ No	
21	**Name and Contact Details of Submitting / Awarding Body SPOC** (In case of CS or MS, provide details of both Lead AB & Supporting ABs)	**Name:** Dr. Praveen Saxena **Email:** ceo@sscgj.in **Contact No.:** 9871119101 **Website: https://sscgj.in/**	
22	**Final Approval Date by NSQC: 27/01/2022**	**23. Validity Duration:** 3 years	**24. Next Review Date: 26/01/2025**

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Section 2: Module Summary

S. No	NOS/Module Name	NOS/Module Code & Version (if applicable)	Core/ Non-Core	NCrF/N SQF 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.	Carry out market analysis	SGJ/N6501 Version 3	Core	6	2	35	25			60						
2.	Formulate an operational plan	SGJ/N0502 Version 3	Core	6	3	30	60			90						
3.	Ensure Compliance with Applicable Statutory Laws, Policies and Procedures	SGJ/N6503 Version 3	Core	6	1	15	15			30						
4.	Ensure Health and Safety at Workplace	SGJ/N6504 Version 4	Core	6	2	30	30			60						
5.	Employability Skills	DGT/VSQ/ N0103	Non-Core	5	3	90				90						
6.	On the Job Training				8					240						
Duration (in Hours) / Total Marks					19	200	130	240	0	**570**						

NOS/s of Qualifications
(In exceptional cases these could be described as components)

Elective NOS/s:

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

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

Elective 1 : Biomass Depot

S. No	NOS/Module Name	NOS/Module Code & Version *(if applicable)*	Core/ Non-Core	NCrF/N SQF Level	Credits as per NCrF	Training Duration (Hours)					Assessment Marks					Weigh tage (%) *(if applica ble)*
						Th.	Pr.	OJT-Man.	OJT – Rec.	Total	Th.	Pr.	Pro j.	Viv a	Total	
1.	Manage overall operations of biomass depot	SGJ/N6505 Version 3	Core	6	1	10	20			30						
Duration (in Hours) / Total Marks					1	10	20	0	0	**30**						

Elective 2 : Compost Yard

S. No	NOS/Module Name	NOS/Module Code & Version *(if applicable)*	Core/ Non-Core	NCrF/N SQF Level	Credits as per NCrF	Training Duration (Hours)					Assessment Marks					Weigh tage (%) *(if applica ble)*
						Th.	Pr.	OJT-Man.	OJT – Rec.	Total	Th.	Pr.	Pro j.	Viv a	Total	
1.	Manage overall operations of compost yard	SGJ/N6506 Version 3	Core	6	1	10	20			30						
Duration (in Hours) / Total Marks					1	10	20	0	0	**30**						

Elective 3: Dry Waste Center

S. No	NOS/Module Name	NOS/Module Code & Version *(if applicable)*	Core/ Non-Core	NCrF/N SQF 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.	Manage overall operations of dry waste collection center	SGJ/N6507 Version 3	Core	6	1	10	20			30						
Duration (in Hours) / Total Marks					1	10	20	0	0	**30**						

<div align="center">Assessment - Minimum Qualifying Percentage</div>

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

<div align="center">Section 3: Training Related</div>

1.	**Trainer's Qualification and experience in the relevant sector (in years)** *(as per NCVET guidelines)*	Graduate/Diploma (Technical) with Two years of experience in Agriculture/Environmental Science). Or Certified under relevant Craft Instructor Training Scheme (CITS) course. *** Relevant experience includes Suitable work experience in (Agriculture/Environmental Science).**
2.	**Master Trainer's Qualification and experience in the relevant sector (in years)** *(as per NCVET guidelines)*	Engineering Graduate with 5 years of **experience in (Agriculture/Environmental Science).**

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)*	Graduate/Diploma (Technical) with Three years of experience in experience in (Agriculture/Environmental Science) Or Certified under relevant Craft Instructor Training Scheme (CITS) course. *** Relevant experience includes Suitable work experience in (Agriculture/Environmental Science).**
2.	**Proctor's Qualification and experience in relevant sector (in years)** *(as per NCVET guidelines)*	Engineering Graduate with 6 years of **experience in (Agriculture/Environmental Science).**
3.	**Lead Assessor's/Proctor's Qualification and experience in relevant sector (in years)** *(as per NCVET guidelines)*	Engineering Graduate with 10 years of **experience in (Agriculture/Environmental Science).**
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):** No.
2.	**Latest Market Research Reports or any other source (not older than 2 years) (Yes/No):** Yes.

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Approved in 15th NSQC Meeting on 27th Jan. 2022

Rationalized in 34th NSQC meeting on 30th Nov. 2023   **QUALIFICATION FILE : STT**   **Qualification Code QG-06-ES-01347-2023-V1.1-SCGJ**

	1. https://www.outlookindia.com/business/india-can-generate-65-gw-energy-annually-from-waste-say-experts-news-311471
	2. https://mohua.gov.in/pdf/627b8318adf18Circular-Economy-in-waste-management-FINAL.pdf
3.	**Government /Industry initiatives/ requirement (Yes/No):** • This Qualification Pack will be used across industry which is organised.
	• It would be used by the training institute for new trainings/For employers to conduct RPL and for annual Appraisal
	• The SSC would submit details of the employment generated (wherever applicable) and realised.
4.	**Number of Industry validation provided:** 10
5.	**Estimated nos. of persons to be trained and employed:** The SSC would submit the estimated uptake of the qualification and What steps were carried out to test the likely uptake of the qualification? The basis of this estimate should include data about the number of jobs or places in courses of learning which will be available to people who are awarded the qualification.
	Job was projected on the basis of total residue generated by 2020 which is 629 million tons along with 247 million tons surplus. Similarly, by 2030, 703 million tons of total residue will be generated along with 348 million tons. (Source: Purohit and Fisher, 2014 estimates)
	Considering typically a biomass depot/godown is of approx. 5000 tons of storing capacity, 49400 Manager-Biomass Depot jobs by 2020 and 69600 jobs by 2030 will be required. Similarly, through a comprehensive study of the waste management practices prevalent in India and consultation with prominent players from this domain, it is found that 20 and 15 persons are required for composting and incineration operations respectively. Estimated generation of total organic waste towards compost production would be 2.13 million MT upto 2020 and 8.66 million MT upto 2030 which would generate approx 1524 and 6184 Manager-Compost Yard jobs respectively(5 TPD Plant @ 280 days per year). Estimated total Dry Waste towards collection & recycling would be 2.59 million MT upto 2020 and 11.83 million MT upto 2030 which would generate approx. 4632 and 21129 Manager-Dry Waste Collection Centre jobs(2 TPD Plant @ 280 days per year) respectively. The details of statistics and research analysis are provided separately as a research analysis report .
6.	**Evidence of Concurrence/Consultation with Line Ministry/State Departments:**
	Concurrence has been requested from the Ministry of New and Renewable Energy

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

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Annexure: Evidence of Level

Title/Name of qualification/component: Manager- Waste Management		Level:6
NSQF Domain	**Outcomes of the Qualification/Component**	**How the outcomes relate to the NSQF level descriptors**	**NSQF Level**
Professional Theoretical Knowledge/ Process	Manager-Waste Management would have knowledge of identifying processes involve in the Biomass depot/Compost Yard/ Dry waste collection center business operation along with statutory compliances and safety norms	The job holder is expected to exhibit factual & theoretical knowledge of waste management and treatment. S/He should have knowledge pertaining to different process improvement tools and techniques, statistical tools to analyse process capability, budgetary systems, methods to monitor, control and evaluate performance against budgets, procurement methods for physical asset to set Biomass depot/Compost Yard/ Dry waste collection center, standard distribution operating procedures, methods of carrying out audits to meet and maintain industry standards .Since this requires the job holder to have factual and theoretical knowledge in broad contexts within a field of work or study, it has been placed at Level 06. Since the job requires	6

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Title/Name of qualification/component: Manager- Waste Management		Level:6
NSQF Domain	**Outcomes of the Qualification/Component**	**How the outcomes relate to the NSQF level descriptors**	**NSQF Level**
		knowledge of more than general concepts, it cannot be place at Level 05.	
Professional and Technical Skills/ Expertise/ Professional Knowledge	This job requires the individual to concentrate and undertake the work regularly to meet deadlines. He should work constructively and collaboratively with others and maintain discipline in work and conduct.	The job holder activities are requiring strong analytical thinking in order to solve the real time problem, the role qualifies for Level 6. The user/individual on the job needs to know and understand how to analyse critical points in day to day tasks through experience and observation and identify control measures to solve the issue, plan and organize the work order and jobs received. Also, the job holder also need to have customer centricity skills like how to understand customer requirements and their priority and respond as per their needs, support manager in solving problems by detailing out problem, discuss the possible solutions with the manager for problem solving. As the job requires a range of cognitive and practical skills required to generate solutions to specific problems of field of work or study, it has been placed at Level 06.	6
Employment Readiness & Entrepreneurship	The individual is should read vernacular & English language, interpret data sheet and should have a good communication skill	The job holder is expected to have good written/oral communication and understanding of various types of waste collection businesses and strategy to utilize manpower at optimal yield. Hence the role qualifies for Level 6. The user/individual must be able to communicate the organization policies and goals clearly	6

Title/Name of qualification/component: Manager- Waste Management		Level:6
NSQF Domain	**Outcomes of the Qualification/Component**	**How the outcomes relate to the NSQF level descriptors**	**NSQF Level**
Skills & Mind-set/Professional Skill		to the employees of workshop, make them understand and commit their energy and expertise to achieve organization goals, make a plan to achieve organization goals by understanding the organization and employees, decide on layout of stores. Since the job requires reasonably good mathematical calculation, understanding of social and political environment, reasonably good data collection and logical communication, it has been placed at Level 06. Since the role requires a holistic knowledge of organizing information and logical communication, it cannot be placed at Level 05.	
Broad Learning Outcomes/ Core Skill	This job requires the individual to concentrate and undertake the work regularly to meet deadlines. He should work constructively and collaboratively with others and maintain discipline in work and conduct.	The job holder activities are requiring strong analytical thinking in order to solve the real time problem, the role qualifies for Level 6. The user/individual on the job needs to know and understand how to analyse critical points in day to day tasks through experience and observation and identify control measures to solve the issue, plan and organize the work order and jobs received. Also, the job holder also need to have customer centricity skills like how to understand customer requirements and their priority and respond as per their needs, support manager in	6

Title/Name of qualification/component: Manager- Waste Management		Level:6	
NSQF Domain	**Outcomes of the Qualification/Component**	**How the outcomes relate to the NSQF level descriptors**	**NSQF Level**
		solving problems by detailing out problem, discuss the possible solutions with the manager for problem solving. As the job requires a range of cognitive and practical skills required to generate solutions to specific problems of field of work or study, it has been placed at Level 06.	
Responsibility	Individual will manage and look-after the work of his/her subordinates and worker in order to run the distribution business properly.	The Manager-Waste Management is responsible for own work and learning and full responsibility for other's works and learning. Thus s/he can be placed at level 6. S/he is responsible for leading and managing the employees at the workshop, scheduling machine running operations, coordinate maintenance activities at the site, establishing processes, policies and best practices for efficient working, assessing the total manpower requirement in the distribution channel, procuring the required resources through suppliers, carrying out storage of dry waste/biomass bales/compost, monitoring safety and environmental management policies and procedures. Since the job holder is responsible for his own work and learning and also fully responsible for other's work and learning, it has been placed at Level 06.	6

Title/Name of qualification/component: Manager- Waste Management		Level:6	
NSQF Domain	**Outcomes of the Qualification/Component**	**How the outcomes relate to the NSQF level descriptors**	**NSQF Level**

Annexure: 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	Moisture Analyzer	standard	1
6	temperature sensor	standard	1
7	Weighing Machine	standard	1
8	safety tools kit	standard	30
9	First Aid Kit	standard	1
10	Demo model of composting unit	standard	1
11	Demo model of Dry waste collection center	standard	1
12	Demo model of Biomass depot	standard	1
13	model product report of factory	As per best practices of industry	2
14	checklist for plant inspection	Standard	2
15	designed model activity chart	As per best practices of industry	10
16	HR policy document	As per best practices of industry	2

| 18 | model balance sheet of factory | As per best practices of industry | 2 |

Classroom Aids

The aids required to conduct sessions in the classroom are:

Marker, chart and visual aid, Pellet production flowchart, raw material supply chain flow chart, Schematics of Manager- Waste Management;

Annexure: 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	3 R Waste Foundation	Dr. Kulwant Singh	CEO	Gurugram	9871953232	kulwantsingh2002@gmail.com	NA
2	Gangotree Eco Technologies	Mr. Santosh Gondhalekar	MD	Pune	9822038222	santoshgo@gmail.com	NA
3	Mindtree	Srikrishna Balachandran	Head-Got Garbage	Bangalore	7406133000	Srikrishna.balachandran@mindtree.com	NA
4	Organic recycling system Pvt. Ltd	Yashas Bhand	Head- Operation and Tech Development	Navi Mumbai	9082562710	Yashas.bhand@orqanicrecycling.co.in	NA
5	PRESPL	Mr. Neeraj Omar	Company Secretary	Navi Mumbai	8898057117	neerajomar@prespl.com	N/A
6	Non-conventional Energy and Rural	Prof. Dr. S. Kamaraj	Director	Coimbatore	9443934139	kamarajs@hotmail.com	NA

| 7 | Sintex | Vishad Shah | Sr. Manager Project | Gandhinagar | 9687667147 | Vishad.shah@sintex.com | NA |
| 8 | Zamindara Farm Solutions | Vikram Ahuja | Director | Fazilka | 9815286611 | Vikaram.ahuja@zamindarafarmsolutions.com | NA |

(first row shows "development Society" continued from previous page)

Annexure: 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
2024-25	100	10	30	30	10	10
2025-26	500	50	50	60	20	20
2026-27	300	30	60	60	20	20

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
2	2022-23	167	150	150									

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. NA

Content availability for previous versions of qualifications:

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

Languages in which Content is available:

Manager- Waste Management

English

Annexure: 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	Not Applicable	NA
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		

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| 6 | ☒Proctored Monitoring/ Assessment/ Evaluation/ Examinations | | |
| 7 | ☒On the Job Training (OJT)/ Project Work Internship/ Apprenticeship Training | | |

Annexure: 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
SGJ/N6501: Carry out market analysis	*Assess the demand of the product*	5	10	-	-
	PC1.. identify the existing demand for the product in given market	1	2	-	-
	PC2.. conduct secondary research to gather information on market determinants such asvolume of sales, economic growth rate, per capita income, etc.	2	2	-	-
	PC3.. conduct primary research through interactions and surveys to understand thepositioning of customers	1	3	-	-

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	PC4.. project the growth in demand through appropriate statistical tools	1	3	-	-
	Carry out market analysis in the given geographyand identify target customers	5	10	-	-
	PC5.. identify various segments of customers and their respective needs in the given market	1	2	-	-
	PC6.. develop profiles of resulting marketsegments	2	2	-	-
	PC7.. identify competitors in the market and assess their respective sales strategies	1	3	-	-
	PC8.. select target segments based on demand forecasting and market segmentation	1	3	-	-
NOS Total		10	20	-	-

NOS/Module Name	Assessment Criteria for Performance Criteria/Learning Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
SGJ/N6502: Formulate an operational plan	*Identify key suppliers of waste*	3	6	-	-
	PC1.. identify key resources required for the facility	1	2	-	-
	PC2.. identify key suppliers of different waste streams, based on the market analysis conducted	1	2	-	-

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	PC3.. identify key technical activities associated with business and productionoperations	1	2	-	-
	Prepare a financial plan	**8**	**13**	-	-
	PC4.. identify market prices of differentcomponents of the facility	2	2	-	-
	PC5.. prepare a medium / long term salesforecast	1	2	-	-
	PC6.. create an expenses budget indicating various fixed and variable costs likely to be encountered	1	3	-	-
	PC7.. ensure development of long term cashflow statement	1	2	-	-
	PC8.. prepare a cost benefit analysis	2	2	-	-
	PC9.. develop a loan repayment plan, ifapplicable	1	2	-	-
NOS Total		**11**	**19**	**-**	**-**

NOS/Module Name	Assessment Criteria for Performance Criteria/Learning Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
SGJ/N6503: Ensure compliance with applicable statutory laws, policies andprocedures	*Liaise with government authorities/local authorities, corporations etc. for smooth conduct of business operations*	12	18	-	-

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	PC1.. outline the functioning of local corporations/authorities that have a bearing onthe business process	2	3	-	-
	PC2.. build and maintain relationships with key persons to ensure smooth functioning of business	2	3	-	-
	PC3.. acquire permissions and fulfil compliance requirements as per legal norms	2	3	-	-
	PC4.. complete business registration andassociated legal formalities	2	3	-	-
	PC5.. update self with knowledge and understanding of the relevant rules and policies	2	3	-	-
	PC6.. update self with information pertaining to compliances, laws, policies, and procedures	2	3	-	-
NOS Total		12	18	-	-

NOS/Module Name	Assessment Criteria for Performance Criteria/Learning Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
SGJ/N6504: Ensure health and safety at workplace	*Monitor safe work practices at the workplace*	15	15	-	-
	PC1. monitor the workplace and work processesfor potential risks and threats	2	2	-	-

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	PC2. ensure recommended safe practices in handling physical, chemical, electrical and firehazards and risk are followed	2	2	-	-
	PC3. demonstrate safe and accepted practices for personal protection	2	2	-	-
	PC4. make sure usage of PPE by self and theteam members	2	2	-	-
	PC5. ascertain the team follows safe working practices when working at height and in confinedspace	2	1	-	-
	PC6. monitor safe handling and usage of appropriate tools, materials and equipment during the work processes	2	2	-	-
	PC7. make sure ergonomic principles arefollowed, wherever required	2	2	-	-
	PC8. ensure safety signs, labels and charts aredisplayed at appropriate places	1	2	-	-
	Ensure compliance to emergency, rescue and first-aid procedures	**15**	**15**	-	-
	PC9. recognize emergency and potentialemergency situations	2	2	-	-
	PC10. ensure no accidents and damages takeplace at the workplace	2	2	-	-

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	PC11. organize and attend fire drills andworkplace safety workshops	3	2	-	-
	PC12. ensure proper emergency and evacuation procedures are followed in case of accidents, firesand natural calamities	2	2	-	-
	PC13. make sure appropriate fire extinguishers are used for different types of fire	*2*	3	-	-
	PC14. administer first aid to victim in case of various medical emergencies including bleeding, burns, choking, electric shock, cardiac arrest, etc.	*2*	2	-	-
	PC15. ensure usage of correct and specified method to move injured person during an emergency	*2*	2	-	-
	Ensure good housekeeping practices and infection control guidelines	*20*	20	-	-
	PC16. ensure recommended personal hygiene, workplace hygiene and sanitation practices are followed at all times	*3*	2	-	-
	PC17. monitor cleaning and disinfecting procedures for all material, tools and supplies	*2*	3	-	-

	PC18. carry out periodic walk-through inspections to keep work area free from hazards and obstructions	*3*	**3**	-	-
	PC19. make sure any case report regarding sign and symptoms of illness of self and other colleagues are reported immediately to concerned authorities	*3*	**3**	-	-
	PC20. identify corrective actions for hazards such as illness, accidents, fires or any other natural calamity	*3*	**3**	-	-
	PC21. identify and recommend suggestions for improving health and safety at the workplace	*3*	**3**	-	-
	PC22. ensure proper processes are followed for disposal of hazardous waste as per standards	*3*	**3**	-	-
NOS Total		**50**	**50**	**-**	**-**

NOS/Module Name	Assessment Criteria for Performance Criteria/Learning Outcomes	Theory	Practical	Project	Viva
DGT/VSQ/N0103: Employability Skills (90 Hours)	*Introduction to Employability Skills*	1	1	-	-
	PC1. understand the significance of employability skills in meeting the current job market requirement and future of work	-	-	-	-

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PC2. identify and explore learning and employability relevant portals	-	-	-	-
PC3. research about the different industries, job market trends, latest skills required and the available opportunities	-	-	-	-
Constitutional values – Citizenship	**1**	**1**	-	-
PC4. 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.	-	-	-	-
PC5. follow environmentally sustainable practices	-	-	-	-
Becoming a Professional in the 21st Century	**1**	**3**	-	-
PC6. recognize the significance of 21st Century	-	-	-	-
PC7. 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	-	-	-	-

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	PC8. adopt a continuous learning mindset for personal and professional development	-	-	-	-
	Basic English Skills	3	4	-	-
	PC9. use basic English for everyday conversation in different contexts, in person and over the telephone	-	-	-	-

PC10. read and understand routine information, notes, instructions, mails, letters etc. written in English	-	-	-	-
PC11. write short messages, notes, letters, e-mails etc. in English	-	-	-	-
Career Development & Goal Setting	1	2	-	-
PC12. identify career goals based on the skills, interests, knowledge, and personal attributes	-	-	-	-
PC13. prepare a career development plan with short- and long-term goals	-	-	-	-
Communication Skills	2	2	-	-
PC14. follow verbal and non-verbal communication etiquette while communicating in professional and public settings	-	-	-	-
PC15. use active listening techniques for effective communication	-	-	-	-
PC16. communicate in writing using appropriate style and format based on formal or informal requirements	-	-	-	-
PC17. work collaboratively with others in a team	-	-	-	-
Diversity & Inclusion	1	1	-	-

PC18. communicate and behave appropriately with all genders and PwD	-	-	-	-
PC19. escalate any issues related to sexual harassment at workplace according to POSH Act	-	-	-	-
Financial and Legal Literacy	**2**	**3**	**-**	**-**
PC20. identify and select reliable institutions for various financial products and services such as bank account, debit and credit cards, loans, insurance etc.	-	-	-	-
PC21. carry out offline and online financial transactions, safely and securely, using various methods and check the entries in the passbook	-	-	-	-
PC22. identify common components of salary and compute income, expenses, taxes, investments etc	-	-	-	-
PC23. identify relevant rights and laws and use legal aids to fight against legal exploitation	-	-	-	-
Essential Digital Skills	**3**	**5**	**-**	**-**
PC24. operate digital devices and use their features and applications securely and safely	-	-	-	-
PC25. carry out basic internet operations by connecting to the internet safely and securely, using the mobile data or other available networks through Bluetooth, Wi-Fi, etc.	-	-	-	-

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PC26. display responsible online behaviour while using various social media platforms	-	-	-	-
PC27. create a personal email account, send and process received messages as per requirement	-	-	-	-
PC28. carry out basic procedures in documents, spreadsheets and presentations using respective and appropriate applications	-	-	-	-
PC29. utilize virtual collaboration tools to work effectively	-	-	-	-
Entrepreneurship	**2**	**3**	-	-
PC30. identify different types of Entrepreneurship and Enterprises and assess opportunities for potential business through research	-	-	-	-
PC31. develop a business plan and a work model, considering the 4Ps of Marketing Product, Price, Place and Promotion	-	-	-	-
PC32. identify sources of funding, anticipate, and mitigate any financial/ legal hurdles for the potential business opportunity	-	-	-	-
Customer Service	**1**	**2**	-	-
PC33. identify different types of customers and ways to communicate with them	-	-	-	-

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	PC34. identify and respond to customer requests and needs in a professional manner	-	-	-	-
	PC35. use appropriate tools to collect customer feedback	-	-	-	-
	PC36. follow appropriate hygiene and grooming standards	-	-	-	-
	Getting ready for apprenticeship & Jobs	**2**	**3**	-	-
	PC37. create a professional Curriculum vitae	-	-	-	-
	PC38. search for suitable jobs using reliable offline and online sources such as Employment exchange, recruitment agencies, newspapers etc. and job portals, respectively	-	-	-	-
	PC39. apply to identified job openings using offline /online methods as per requirement	-	-	-	-
	PC40. answer questions politely, with clarity and confidence, during recruitment and selection	-	-	-	-
	PC41. identify apprenticeship opportunities and register for it as per guidelines and requirements	-	-	-	-
NOS Total		**20**	**30**	-	-

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NOS/Module Name	Assessment Criteria for Performance Criteria/Learning Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
SGJ/N6505: Manage overall operations of biomass depot	*Identify sources for procurement and supply ofbiomass*	4	7	-	-
	PC1.. identify the various suppliers for biomass procurement	2	3	-	-
	PC2.. ensure biomass supply is channelizedfrom identified suppliers	2	4	-	-
	Ensure smooth running of biomass depotoperations.	8	14	-	-
	PC3.. ensure proper sorting, densification and appropriate storage of biomass	2	4	-	-
	PC4.. conduct regular meetings with various supervisors	2	3	-	-
	PC5.. identify technical challenges encounteredin daily operations	2	4	-	-
	PC6.. monitor financial performance of thebusiness	2	3	-	-
	Oversee business marketing	6	11	-	-
	PC7.. organize resources for efficient business marketing of agri-biomass	2	4	-	-

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	PC8.. communicate the value proposition andpricing of the products to the marketing team	2	3	-	-
	PC9.. work closely with marketing managers, distributors, key customers and representatives in solving customer problemsand developing service programs	2	4	-	-
NOS Total		**18**	**32**	**-**	**-**

NOS/Module Name	Assessment Criteria for Performance Criteria/Learning Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
SGJ/N6506: Manage overall operations of compost yard	*Ensure smooth running of the plant*	6	10	-	-
	PC1.. examine compost yard production process records regularly	2	2	-	-
	PC2.. conduct periodic meetings with various supervisors	1	3	-	-
	PC3.. identify technical challenges encounteredin daily operations	1	3	-	-
	PC4.. devise remediation measures for technical challenges encountered in daily operations, in coordination with the supervisors	2	2	-	-
	Monitor the financial performance of the business	7	10	-	-
	PC5.. examine the company's financial statements on a regular basis	2	2	-	-

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	PC6.. examine the credit and debt position of the business on a regular basis	1	2	-	-
	PC7.. examine inventory reports and assess resource use and requirements	1	2	-	-
	PC8.. coordinate with finance team to identify various challenges faced	2	2	-	-
	PC9.. identify potential contingencies applicableto the business	1	2	-	-
	Manage human resources	2	4	-	-
	PC10.. establish an accessible platform for employees to express their grievances and concerns	1	2	-	-
	PC11.. interact with employees on a regular basisto discuss their grievances and concerns	1	2	-	-
	Monitor the overall performance of the business on regular basis	7	13	-	-
	PC12.. establish Key Performance Indicators(KPIs) for various departments	2	2	-	-
	PC13.. monitor the performance of various departments against the established Key Performance Indicators(KPIs)	*1*	3	-	-
	PC14.. conduct meetings with concerned departments on a regular basis for discussions on performance around Key Performance Indicators(KPIs)	*1*	2	-	-

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	PC15.. analyze performance of competitors and discuss / implement some of industry best practices	1	3	-	-
	PC16.. foster a hospitable, friendly, and productive work environment	2	3	-	-
	Oversee marketing of the products	6	10	-	-
	PC17.. organize resources for efficient marketing of products	1	2	-	-
	PC18.. evaluate the effectiveness of marketing campaigns to identify avenues for enhancing market share and profitability	2	2	-	-
	PC19.. communicate the value proposition of the products to the marketing team	1	3	-	-
	PC20.. work closely with marketing team, distributors, key customers and representatives in solving customer problems and developing service programs	2	3	-	-
NOS Total		**28**	**47**	**-**	**-**

NOS/Module Name	Assessment Criteria for Performance Criteria/Learning Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
SGJ/N6507: Manage overall operations of dry waste collection center	*Ensure continuity in daily operations*	5	14	-	-
	PC1.. examine daily reports on a periodic basis	1	3	-	-
	PC2.. identify and address issues (if any) withtransport vehicles	1	2	-	-
	PC3.. conduct regular meetings with variousplant supervisors	1	3	-	-
	PC4.. identify technical challenges encounteredin daily operations	1	3	-	-
	PC5.. devise remediation measures for technical challenges encountered in daily operations, in coordination with the supervisors	1	3	-	-
	Oversee plastic waste management operations	5	8	-	-
	PC6.. identify various categories of plastic wastebeing handled	1	2	-	-
	PC7.. ensure the availability of machinery, manpower and other resources for requisitetreatment / pre-processing of plastic waste	1	2	-	-
	PC8.. coordinate with concerned supervisors to ensure timely and accurate segregation of plasticwaste into various identified categories	1	2	-	-
	PC9.. examine daily material summary reports	2	2	-	-

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	Oversee paper waste management operations	3	6	-	-
	PC10.. identify various categories of paper wastebeing handled	1	2	-	-
	PC11.. ensure the availability of machinery, manpower and other resources for requisite treatment / pre-processing of paper waste	1	2	-	-
	PC12.. coordinate with concerned supervisors to ensure timely and accurate segregation of paperwaste into various identified categories	1	2	-	-
	Oversee other waste management operations	5	9	-	-
	PC13.. identify various categories of other waste being handled	1	2	-	-
	PC14.. ensure the availability of machinery, manpower and other resources for requisite treatment / pre-processing of other waste	1	3	-	-
	PC15.. coordinate with concerned supervisors to ensure timely and accurate segregation of other waste into various identified categories	1	2	-	-
	PC16.. ensure the disposal / utilization of such materials in a responsible manner	2	2	-	-
	Monitor the financial performance of the business	5	7	-	-
	PC17.. examine the company's financial statements on a regular basis	2	2	-	-
	PC18.. identify various challenges faced pertaining to				

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	finance	1	3	-	-
	PC19.. identify potential contingencies applicable to the business	2	2	-	-
	Manage human resources	2	6	-	-
	PC20.. establish an accessible platform for employees to express their grievances and concerns	1	3	-	-
	PC21.. interact with employees on a regular basis to discuss their grievances and concerns	1	3	-	-
NOS Total		**25**	**50**	**-**	**-**

Annexure: 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 SIP
   - 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

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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.

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- 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.

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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

Annexure: Annexure: Career Progression and OM

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