QUALIFICATION FILE

Junior Technician (Natural Fibre – Geotextile)

☒ 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
NCrF/NSQF Level:3.0

Submitted By:
Indian Jute Industries' Research Association

Submitting Body Name
Indian Jute Industries' Research Association,
17 Taratala Road, Kolkata – 700088, West Bengal

Submitting Body Contact Details:
Position in the organization: Director, IJIRA
Tel number(s): 033-6626 9231, **E-mail address**: director.office@ijira.org.in

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Section 1: Basic Details

<table>
<tr><td>1.</td><td>Qualification Name</td><td colspan="2">Technician (Natural Fibre - Geotextile and its Application)</td></tr>
<tr><td>2.</td><td>Sector/s</td><td colspan="2">Textiles</td></tr>
<tr><td>3.</td><td>Sub sector</td><td colspan="2">NA</td></tr>
<tr><td>4.</td><td>Type of Qualification ☒ New ☐ Revised ☐ Has Electives/Options</td><td>NQR Code & version of the existing /previous qualification: (change to previous, once approved) NA</td><td>Qualification Name of the existing version: (previous, once approved) NA</td></tr>
<tr><td>5.</td><td>National Qualification Register (NQR) Code & Version
(Will be issued after NSQC approval)</td><td>QG-03-TX-03506-2025-V1-IJIRA & Version 1.0</td><td>6. NCrF/NSQF Level: 3.0</td></tr>
<tr><td>7.</td><td>Award (Certificate/Diploma/ Advanced Diploma/Any Other)
(Wherever applicable specify multiple entry/exits also & provide details in annexure)</td><td colspan="2">Certificate</td></tr>
<tr><td>8.</td><td>Brief Description of the Qualification</td><td colspan="2">Junior Technician (Natural Fibre – Geotextile) should be able to manufacture product, processes and quality required at various geotextile products as per standard.</td></tr>
<tr><td>9.</td><td>Eligibility Criteria for Entry for Student/Trainee/Learner/Employee</td><td colspan="2">a. Entry Qualification & Relevant Experience
<table>
<tr><th>S. No.</th><th>Academic/Skill Qualification (with Specialization - if applicable)</th><th>Relevant Experience (with Specialization - if applicable)</th></tr>
<tr><td>1</td><td>- Grade 10 pass</td><td>No experience</td></tr>
</table>
b. Entry Age:18</td></tr>
<tr><td>10.</td><td>Credits Assigned to this Qualification (as per National Credit Framework (NCrF))</td><td>10</td><td>11. Common Cost Norm Category (I/II/III) (wherever applicable): I</td></tr>
<tr><td>12.</td><td>Any Licensing Requirements for Undertaking Training on This Qualification (wherever applicable)</td><td colspan="2">NA</td></tr>
</table>

<table>
<tr><td>13.</td><td>Training Duration by Modes of Training Delivery (Specify Total Duration as per selected training delivery modes and as per requirement of the qualification)</td><td colspan="2">☐ Offline Only ☐ Online Only ☒ Blended

<table>
<tr><th>Training Delivery Modes</th><th>Theory (Hours)</th><th>Practical (Hours)</th><th>OJT Mandatory (Hours)</th><th>OJT Recommended (Hours)</th><th>Total (Hours)</th></tr>
<tr><td>Classroom (offline)</td><td>67.5</td><td>112.5</td><td>45</td><td>0</td><td>225</td></tr>
<tr><td>Online</td><td>22.5</td><td>37.5</td><td>15</td><td>0</td><td>75</td></tr>
</table>
(Refer Blended Learning Annexure for details)</td></tr>
<tr><td>14.</td><td>Aligned to NCO/ISCO Code/s (if code is not available, then mention the same)</td><td colspan="2">NCO-2015/ 2142.0300</td></tr>
<tr><td>15.</td><td>Progression Path After Attaining the Qualification
(Please show Professional and Academic progression) (wherever applicable)</td><td colspan="2">Potential Progression path –
Technician in Geotextile and its Application (Natural Fibre) - (yet to develop)</td></tr>
<tr><td>16.</td><td>Other Indian Languages in which the Qualification & Model Curriculum are being Submitted</td><td colspan="2">Hindi</td></tr>
<tr><td>17.</td><td>Is similar Qualification(s) available on NQR-if yes, justification for this qualification</td><td colspan="2">☐ Yes ☒ No URLs of similar Qualifications:</td></tr>
<tr><td>18.</td><td>Is the Job Role Amenable to Persons with Disability</td><td colspan="2">☐ Yes ☒ No If “Yes”, specify applicable type of Disability. Job Role Amendable for Following Type of Disabilities: Locomotor Disability (Leprosy Cured Person, Dwarfism, Acid Attack Victims) and Blood Disorder (Thalassemia, Sickle Cell) Partial Organ Imputation (of anyone hand or leg), Hearing Impairment (Hard of Hearing)</td></tr>
<tr><td>19.</td><td>How participation of women will be encouraged?</td><td colspan="2">The proposed qualification is related to jute yarn production which is mostly organized and carried out in Jute Mill having significant participation of women in the families. Therefore, the proposed qualification having great potential for women to take leading positions in the process.</td></tr>
<tr><td>20.</td><td>Are Greening/ Environment Sustainability Aspects Covered (Specify the NOS/Module which covers it), wherever applicable</td><td colspan="2">☒ Yes ☐ No
Employability Skills DGT/VSQ/N0101, V 1.0</td></tr>
<tr><td>21.</td><td>Is Qualification Suitable to be Offered in Schools/Colleges</td><td colspan="2">Schools☐ Yes ☒ No Colleges ☐ Yes ☒ No</td></tr>
<tr><td>22.</td><td>Name and Contact Details of Submitting / Awarding Body SPOC
(In case of CS or MS, provide details of both Lead AB & Supporting ABs)</td><td colspan="2">Name: Debi Prasad Gon, Scientist, IJIRA
Email: debiprasad.gon@ijira.org.in
Contact No.: 8906908459
Website: www.ijira.org.in</td></tr>
<tr><td>23.</td><td>Final Approval Date by NSQC: 18.02.2025</td><td>24. Validity Duration: 3 Years</td><td>25. Next Review Date: 18.02.2028</td></tr>
</table>

Section 2: Module Summary

NOS/s of Qualifications

(In exceptional cases these could be described as components)

Mandatory NOS/s:

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

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

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.	Raw Material for various Geotextile products	IJIRA/N4002, V 1.0	Core	3	0.5	5	10	0	0	**15**	25	20	-	05	50	10.00%
2.	Standardization of Geotextile process	IJIRA/N4003, V 1.0	Core	3	2	10	30	20	0	**60**	25	40	-	10	75	15.00%
3.	Machinery for construction of Geotextiles	IJIRA/N4004, V 1.0	Core	3	2	10	30	20	0	**60**	25	40	-	10	75	15.00%
4.	Manufacturing of Geotextiles product with desired specification	IJIRA/N4005, V 1.0	Core	3	2	10	30	20	0	**60**	25	40	-	10	75	15.00%
5.	Basic maintenance of Geotextile machinery	IJIRA/N4006, V 1.0	Core	3	1	10	20	0	0	**30**	25	40	-	10	75	15.00%
6.	Product quality of Geotextiles	IJIRA/N4007, V 1.0	Core	3	1	10	20	0	0	**30**	25	20	-	05	50	10.00%
7.	Maintain health, safety and security at work place	IJIRA/N4008, V 1.0	Non-Core	3	0.5	5	10	0	0	**15**	25	20	-	05	50	10.00%
8.	Employability Skills-30 hrs	DGT/VSQ/N0101, V 1.0	Non-Core	3	1	30	0	0	0	**30**	25	20	-	05	50	10.00%
Duration (in Hours) / Total Marks					**10**	**90**	**150**	**60**	**0**	**300**	**200**	**240**	**-**	**60**	**500**	**100**

Elective NOS/s: NA

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.																
2.																
Duration (in Hours) / Total Marks																

Optional NOS/s: NA

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.																
2.																
Duration (in Hours) / Total Marks																

Assessment - Minimum Qualifying Percentage

Please specify any one of the following:

Minimum Pass Percentage – Aggregate: 60%

Section 3: Training Related

1.	**Trainer's Qualification and experience in the relevant sector (in years)** *(as per NCVET guidelines)*	**Trainer Prerequisites**

Minimum Educational Qualification (Any One)	Specialization	Relevant Industry Experience		Training Experience		Remarks
		Years	*Specialization*	*Years*	*Specialization*	
B.Tech/BE	Jute/Textile Technology/Textile Engineering/ /Civil Engineering	Nil	Jute/Textile Technology/Textile Engineering/ /Civil Engineering	Nil	Jute/Textile Technology/Textile Engineering/ /Civil Engineering	
Diploma	Jute/Textile Technology/Textile Engineering/ /Civil Engineering	2	Jute/Textile Technology/Textile Engineering/ /Civil Engineering	1	Jute/Textile Technology/Textile Engineering/ /Civil Engineering	

		Post Graduate Diploma | Jute/Textile Technology/Textile Engineering/ /Civil Engineering | Nil | Jute/Textile Technology/Textile Engineering/ /Civil Engineering | Nil | Jute/Textile Technology/Textile Engineering/ /Civil Engineering |
2.	**Master Trainer's Qualification and experience in the relevant sector (in years)** *(as per NCVET guidelines)*	**Master Trainer Prerequisites**

Minimum Educational Qualification (Any One)	**Specialization**	**Relevant Industry Experience**		**Training Experience**		**Remarks**
		Years	***Specialization***	***Years***	***Specialization***	
B.Tech/BE	Jute/Textile Technology/Textile Engineering/ /Civil Engineering	1	Jute/Textile Technology/Textile Engineering/ /Civil Engineering	Nil	Jute/Textile Technology/Textile Engineering/ /Civil Engineering	-
Diploma	Jute/Textile Technology/Textile Engineering/ /Civil Engineering	4	Jute/Textile Technology/Textile Engineering/ /Civil Engineering	1	Jute/Textile Technology/Textile Engineering/ /Civil Engineering	-
Post Graduate Diploma	Jute/Textile Technology/Textile Engineering/ /Civil Engineering	2	Jute/Textile Technology/Textile Engineering/ /Civil Engineering	Nil	Jute/Textile Technology/Textile Engineering/ /Civil Engineering	

3.	**Tools and Equipment Required for the Training**	☒Yes ☐No (Refer *Annexure 2)*
4.	**In Case of Revised Qualification, Details of Any Upskilling Required for Trainer**	**NA**

Section 4: Assessment Related

1. **Assessor's Qualification and experience in relevant sector (in years)** *(as per NCVET guidelines)*

Assessor Prerequisites

Minimum Educational Qualification (Any One)	Specialization	Relevant Industry Experience		Training Experience		Remarks
		Years	*Specialization*	*Years*	*Specialization*	
B.Tech/BE	Jute/Textile Technology/Textile Engineering/ /Civil Engineering	2	Jute/Textile Technology/Textile Engineering/ /Civil Engineering	Nil	Jute/Textile Technology/Textile Engineering/ /Civil Engineering	
Diploma	Jute/Textile Technology/Textile Engineering/ /Civil Engineering	4	Jute/Textile Technology/Textile Engineering/ /Civil Engineering	1	Jute/Textile Technology/Textile Engineering/ /Civil Engineering	
Post Graduate Diploma	Jute/Textile Technology/Textile Engineering/ /Civil Engineering	2	Jute/Textile Technology/Textile Engineering/ /Civil Engineering	Nil	Jute/Textile Technology/Textile Engineering/ /Civil Engineering	

2. **Proctor's Qualification and experience in relevant sector (in years)** *(as per NCVET guidelines) wherever applicable*

Proctor's Prerequisites

Minimum Educational Qualification (Any One)	Specialization	Relevant Industry		Training Experience		Remarks
		Years	*Specialization*	*Years*	*Specialization*	
B.Tech/BE	Jute/Textile Technology/Textile Engineering/ /Civil Engineering	2	Jute/Textile Technology/Textile Engineering/ /Civil Engineering	Nil	Jute/Textile Technology/Textile Engineering/ /Civil Engineering	
Diploma	Jute/Textile Technology/Textile Engineering/ /Civil Engineering	4	Jute/Textile Technology/Textile Engineering/ /Civil Engineering	1	Jute/Textile Technology/Textile Engineering/ /Civil Engineering	
Post Graduate Diploma	Jute/Textile Technology/Textile Engineering/ /Civil Engineering	2	Jute/Textile Technology/Textile Engineering/ /Civil Engineering	Nil	Jute/Textile Technology/Textile Engineering/ /Civil Engineering	

3. **Lead Assessor's/Proctor's Qualification and experience in relevant sector (in years)** *(as per NCVET guidelines) wherever applicable*

Lead Assessor Prerequisites

Minimum Educational Qualification (Any One)	Specialization	Relevant Industry Experience		Training Experience		Remarks
		Years	*Specialization*	*Years*	*Specialization*	
B.Tech/BE	Jute/Textile Technology/Textile Engineering/ /Civil Engineering	3	Jute/Textile Technology/Textile Engineering/ /Civil Engineering	Nil	Jute/Textile Technology/Textile Engineering/ /Civil Engineering	
Diploma	Jute/Textile Technology/Textile Engineering/ /Civil Engineering	5	Jute/Textile Technology/Textile Engineering/ /Civil Engineering	1	Jute/Textile Technology/Textile Engineering/ /Civil Engineering	
Post Graduate Diploma	Jute/Textile Technology/Textile Engineering/ /Civil Engineering	4	Jute/Textile Technology/Textile Engineering/ /Civil Engineering	Nil	Jute/Textile Technology/Textile Engineering/ /Civil Engineering	

4.	**Assessment Mode***(Specify the assessment mode)*	**(MCQ based Written Test + Practical + Viva) in Hybrid mode**
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 Need for the Qualification

Provide Annexure/Supporting documents name.

1.	Justification of being a Traditional-Heritage Qualification in unorganized sector (Yes/No): NO
2.	Government /Industry initiatives/ requirement (Yes/No): *Yes*
3.	Number of Industry validation provided: 5 (Annexure – 3)
4.	Estimated nos. of people to be trained and employed: *1800 Candidates, (please also refer Annexure 4)*

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)*	Yes, (Annexure-1)
2.	**Annexure:** List of tools and equipment relevant for qualification *(Mandatory, except in case of online course)*	Yes, (Annexure-2)
3.	**Annexure: Industry Validations Summary**	Yes, (Annexure-3)
4.	**Annexure: Training & Employment Details**	Yes, (Annexure-4)
5.	**Annexure: Blended Learning *(Mandatory, in case selected Mode of delivery is Blended Learning)***	Yes, (Annexure-5)
6.	**Annexure:** Detailed Assessment Criteria *(Mandatory)*	Yes, (Annexure-6)
7.	**Annexure:** Assessment Strategy *(Not Mandatory)*	Yes, (Annexure-7)
8.	**Annexure:** Multiple Entry-Exit Details *(Mandatory, in case qualification has multiple Entry-Exit)*	*NA*
9.	**Annexure:** Acronym and Glossary *(Optional)*	Yes, (Annexure-9)

10.	**Supporting Document:** Model Curriculum *(Mandatory – Public view)*	Yes, (Annexure-10)
11.	**Supporting Document:** Career Progression *(Optional - Public view)*	Yes, (Annexure-11)
12.	**Any other document you wish to submit:**	Yes, (Annexure-12)

Annexure 1: Evidence of Level

NCrF/NSQF Level Descriptors	Key requirements of the jobrole/ outcome of the Qualification	How the job role/ outcomesrelate to the NCrF/NSQF level descriptor	NCrF/ NSQF Level
Professional Theoretical Knowledge/ Process	Junior Technician (Natural Fibre – Geotextile) who works in Multidisciplinary and specialized knowledge on the preparing and processing the Natural fibers before they are spun into yarn, fabric and subsequently geotextile product. • In-depth knowledge of jute fiber properties, including strength, fineness, moisture content, and color variations, which impact yarn & fabric quality and performance. • Understands in operating various yarn and fabric manufacturing process, understanding their functions, controls and adjustments. • Ability to optimize machine parameters such as speed, tension, twist levels, and drafting to achieve desired yarn characteristics and production efficiency. • Knowledge of basic/routine maintenance tasks, machine cleaning, lubrication to ensure smooth machinery operation. • Proficiency in various yarn and fabric manufacturing process and quality inspection	A Junior Technician (Natural Fibre – Geotextile), should possess practical hands-on experience, in addition to technical knowledge, is crucial for achieving consistent and desired quality yarn/fabric for geotextile product. • The Technician gets work allotted by his superior and is responsible for maintaining the geotextile product quality, in process material efficiently so as to get maximum output with minimum waste, with less cost of production giving due importance to safety and environment aspects. He should carry out all the activities like uniform sliver & uniform yarn/fabric, identification of defects and minor defects of jute yarn/fabric quality, defect of yarn package (spool / cone), fabric etc. • This Technician proactively identifies the causes that may result in machine faults and causes of irregular sliver/ yarn ensure that quality and productivity is maintained Hence this is Level 3.0	3.0

Professional and Technical Skills/ Expertise/ Professional Knowledge	The Junior Technician (Natural Fibre – Geotextile) has specialized knowledge of the range of technical, operational and theoretical aspects related to manufacturing of geotextile product like yarn and fabric. • Have knowledge of the physical and chemical properties of natural fibers used in geotextile, including strength, fineness, color and moisture content. • The Technician will have the specialized knowledge of the raw fibre handling and processing, • Principles of fibre softening and carding techniques, Drawing and drafting principles spinning, including twist insertion, drafting and winding and their impact on yarn characteristics. • Potential hazards associated with the machines and the safety precautions that must be taken • Work Targets & review with Superiors • Process and material flow in geotextile product • The minimum yarn quality requirements of the product with respect to natural fibre • Effects of contamination on products i.e. machine oil, dirt, foreign materials • Adherence to safety protocols when working with machinery, chemicals, and equipment.	A complete understanding of these areas of professional knowledge is essential for a Junior Technician (Natural Fibre – Geotextile) to perform their role effectively and contribute to the successful production of high-quality jute yarn as well as fabric / bags / diversified products • The individual should have a good understanding of technical specifications and functionalities of products and processes, knowledge of functioning techniques along with skill set for managing concerns/issues, and standards/guidelines of geotextile manufacturing process. • Also, know the causes of irregular in-process material and its products incurred due to lack of skill and knowledge of man and machine faults and able to identify each one or in combination and also able to rectify defects. • A Technician effectively contribute to the initial stages of sliver, yarn & fabric quality by ensuring that the Natural fibers are well-prepared and processed for subsequent yarn & fabric manufacturing processes. Hence this is Level 3.0	3.0
Employment Readiness & Entrepreneurship Skills & Mind-set/Professional Skill	Professional and Technical skills play a crucial role in the effectiveness and success of a Junior Technician (Natural Fibre – Geotextile). These skills encompass both technical expertise and interpersonal abilities necessary to excel in the role. • Proficiently control various spinning, winding, weaving, non-woven and finishing machinery.	The individual is required to have a range of technical skills, to be competitive in this job role, such as strong analytical and problem-solving skills, verbal and written communication skills. Comply with standards related to jute industries. • Manage time efficiently to meet production targets, adhere to schedules, and ensure timely completion	3.0

	• Set up and adjust machine parameters such as speed, draft, and twist levels for optimal sliver/yarn/fabric production. • Conduct thorough quality checks on yarn, including tensile strength, fineness, hairiness and visual appearance on display board. • Identify and address defects or irregularities in the production process to ensure high-quality yarn and fabric output. • Diagnose and resolve technical issues that may arise during processing, such as machine malfunctions or yarn breakage. • Monitor equipment health and address maintenance needs promptly to prevent downtime • Adhere to safety protocols and guidelines to ensure a safe working environment when handling machinery, chemicals, and equipment and material	of tasks. • Optimize machine operation for efficient yarn /fabric production while maintaining quality standards • Adapt to changes in production processes, machine setups, or work assignments as needed. - Stay updated on industry advancements, new technologies, and best practices in jute processing. • Cultivating these professional skills alongside the technical knowledge and theoretical concepts is essential for a Technician for Natural Fibre based Geotextile and its Application to excel in their role and contribute effectively to the industry. Hence this is Level 3.0	
Broad Learning Outcomes/Core Skill	• Strong communication skills to convey technical information, share ideas and coordinate tasks with team members and supervisors. • The ability to work effectively with other team members both within the department and across different departments within the jute mill. • The ability to communicate clearly and effectively with colleagues, supervisors and team members is crucial for conveying information, report issues and collaborating on tasks. • Analyzing situations, identifying challenges and applying critical thinking to find solutions to technical and operational issues. • Maintaining a positive and proactive mindset, taking initiative to address challenges and contributing to a positive work environment. • The Technician often needs to write reports, maintenance	A Technician able to convey clear and short sentences, makes daily work report, able to follow written instructions, communicates with the production, maintenance department appropriately and talks to others to convey information effectively. Applies problem-solving approaches in different situations during the production and performs basic work required during the production process for quality and uninterrupted output. • Adhering to ethical standards, practicing professional behavior, and demonstrating integrity, respect, and responsibility in interactions and tasks. • Enhance the overall capabilities of Technician for Natural Fibre based Geotextile and its Application making them not only proficient in technical tasks but also valuable team members who contribute to	3.0

	logs or documentation related to their work. They should have the ability to communicate technical information in a written format, which may include detailed instructions, equipment specifications and maintenance records.	the quality, productivity and success of the industry. Hence the level is 3.0	
Responsibility	• The responsibilities of a Technician for Natural Fibre based Geotextile encompass a range of tasks related to processing jute fibers and producing high-quality yarn/fabric through spinning and weaving or nonwoven processes. Their role is vital in ensuring that geotextile yarns are transformed into fabric that meets standards and can be used in various geotextile products. • Perform routine tasks on spinning, weaving/nonwoven and finishing machinery, including inspection of finished goods. Address any technical issues that may arise to prevent disruptions in production. • Diagnose and resolve technical issues or malfunctions during processing, ensuring that quality of yarn and fabric and that production remain uninterrupted. • Report to his superior about the quality / production / safety issues/ any other issue faced in department and should leave the department only after getting concurrence for the same from his/ her superiors	The responsibility of a Technician for Natural Fibre based Geotextiles are diverse and play a vital role in ensuring the production of high-quality yarn and fabric which serves as a foundational material for various geotextile products in the industry. • Takes complete responsibility for delivery and quality of work and output as also the subordinates. • Work collaboratively with team members, supervisors, and colleagues to coordinate tasks, share information, and achieve production targets Hence, this is level 3.0	3.0

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

List of Tools and Equipment

Batch Size: 30 Trainees

S. No.	Tool / Equipment Name	Specification	Quantity for specified Batch size
1	Yarn manufacturing machinery	Yarn preparatory machines, Spinning machine	01 no
2	Fabric manufacturing machinery	Fabric preparatory machines, Power loom, Shuttleless Loom etc.	01 no
3	Non-woven machinery / Knitting machine		01 no
4	Lapping machine	60" width / 36-37 strokes	01 no
5	Cutting machine	Rotary machine / Guillotine machine	01 no
6	Sewing machine	Hirackle machine / Hemming machine	01 no
7	Yarn strength tester	CRT / CRE type tensile strength tester	01 no
8	Fabric strength tester	CRT / CRE type tensile strength tester	01 no
9	Weighing machine	2 kg to 100 kg	01 no
10	Moisture Meter	Calibrated Moisture Meter	01 no
11	Measuring Tape	-	05 nos
12	RH meter	-	01 no
13	Fabric Thickness Tester		01 no
14	CBR Puncture Tester		01 no
15	Lathe machine / Shaping machine / Drilling machine / Milling and grinding machine / Grease gun	-	01no
16	Lubrication Injectors / Pumps / Hydraulic Pumps /Oil Injectors	-	01no
17	Computer latest configuration		1 nos
18	First aid kit	As applicable	1 no of each

Classroom Aids

The aids required to conduct sessions in the classroom are:

1. White Board
2. White board writing pen
3. Duster
4. Projector
5. Computer

Annexure 3: Industry Validations Summary

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

	Organization Name	Representative Name	Designation	Contact Address	Contact Phone No	E-mail ID	LinkedIn Profile (if available)
1	Auckland International Ltd.	S.N. Dutta	Asst. Manager (SQC)	Mill: Jagatdal, North 24 Pgs, WB, PIN - 743125	9831355577	ail@aucklandjute.com	NA
2	Birla Corporation Limited, Unit- Birla Jute Mills	Anup Pandey	Sr. General Manager	Birlapur, 24 Parganas (South), PIN- 743318	9163710182	anup.pandey@birlacorp.com	NA
3	Reliance Jute Mills Ltd.	Partha Banerjee	Development Manager	East Ghoshpara Rd. P.O-Bhatpara, 24 Pgs (N), 743123	9051515235	mill@reliancejute.com	NA
4	Aditya Translink Pvt. Ltd. (Unit: Samnuggur Jute Factory, North Mill)	Subhrangsu Bose	President Works	9, India Exchange Place, Kolkata – 700 001	8296793613	atpljute@gmail.com	NA
5	Anglo India & Textile Industries Ltd.	Kamal Nath Jha	Vice President	1, West Ghoshpara Road, Jagatdal, North 24 parganas, Pin- 743125	9339871441	aijmshipping@gayatrigroup.co	NA

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	300	250	-	-	-	-
2026-27	600	500	-	-	-	-
2027-28	900	650	-	-	-	-

Data to be provided year-wise for next 3 years.

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

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

Qualification Version	Year	Total Candidates				Women				People with Disability			
		Trained	Assessed	Certified	Placed	Trained	Assessed	Certified	Placed	Trained	Assessed	Certified	Placed
___	___	___	___	___	___	___	___	___	___	___	____	___	___

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

NA

Content availability for previous versions of qualifications:

NA

Languages in which Content is available: English

Annexure 5: Blended Learning

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 theQualification	List Recommended Tools – for all SelectedComponents	Offline : Online Ratio
1	□Theory/ Lectures - Imparting theoretical and conceptual knowledge	Audio Visual, PPT & Class room lectures	75: 25

2	□Imparting Soft Skills, Life Skills, andEmployability Skills /Mentorship to Learners	Audio Visual, PPT	75: 25
3	□Showing Practical Demonstrationsto the learners	Audio Visual, PPT	75: 25
4	□Imparting Practical Hands-on Skills/Lab Work/ workshop/ shop floor training	NA	NA
5	□Tutorials/ Assignments/ Drill/Practice	NA	NA
6	□Proctored Monitoring/ Assessment/Evaluation/ Examinations	Examination portal, online streaming, physical Assessment, Theoretical	75: 25
7	□On the Job Training (OJT)/ ProjectWork Internship/ Apprenticeship Training	NA	NA

Annexure 6: 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
IJIRA/N4002, V 1.0 Raw Material for various Geotextile products	PC1:Knowledge Physical properties of Fibre for Geotextiles	4	4	-	-
	PC2: Demonstrate the Mechanical properties like a) tenacity, b) tensile strength, c) bursting strength d) drapability, e) compatibility, f) flexibility, g) tearing strength, h) frictional resistance	5	4	-	1
	PC 3:Demonstrate the Hydraulic properties such as a) porosity, b) permeability, c) permittivity, d)transitivity, e) turbidity /soil retention, f) filtration length etc	4	3	-	1

	PC 4: Explain the Degradation properties such as a) biodegradation, b) hydrolytic degradation, c) photo degradation, d) chemical degradation, e) mechanical degradation, f) other degradation occurring due to attack of rodent, termite etc.	4	3	-	1
	PC 5: Carry out Fibre Testing parameters – strength, fineness, root, defects, colour, MR% etc.	4	3	-	1
	PC 6: Demonstrate of improved Endurance properties: a) elongation b) abrasion resistance, c) clogging length and flow etc	4	3	-	1
	Total Marks	**25**	**20**	**-**	**05**
IJIRA/N4003, V 1.0 Standardization of Geotextile process	PC 1: Illustrate the yarn & fabric properties and its requirements for Geotextile applications	3	4	-	1
	PC 2:Understand the mechanism of formation of yarns for different geotextiles	3	4	-	1
	PC 3: Prepare flow chart and batch composition for manufacturing of yarn	3	4	-	1
	PC 4: Understand the mechanism of formation of woven fabrics for different geotextiles	3	4	-	1
	PC 5: Prepare flow chart woven fabric quality	3	4	-	1
	PC 6: Understand the mechanism of formation of nonwoven fabrics for different geotextiles	2	4	-	1
	PC 7: Carry out the sliver / yarn quality as per quality standard of geotextile product	2	4	-	1
	PC 8 : Measurement of Sliver, yarn weight at different stages	2	4	-	1
	PC 9: Carry out quality and standards required in the jute mill in Jute batching, carding, drawing and spinning section	2	4	-	1
	PC 10 : Carry out Production calculations of spinning, weaving & nonwoven machineries	2	4	-	1
	Total Marks	**25**	**40**	**-**	**10**
IJIRA/N4004, V 1.0 Machinery for construction of Geotextiles	PC 1: Explain Jute Spreader / Softener, Carding, drawing and spinning machine and identification of parts	1	2	-	-
	PC 2: Calculate Draft & doubling and its necessity for sliver and yarn preparation	1	2	-	-
	PC 3: Carry out by hand and eye method the following quality parameters of raw jute fibres during selection, Strength, Root content, Defects, Colour,	1	2	-	-

	Fineness, Bulk-Density				
	PC 4: Prepare quality wise Batch mix	1	2	-	-
	PC5: Carryout the moisture content of jute morah has been taken properly for future reference	1	2	-	-
	PC6: Perform basic maintenance work to be carried out in the shift in case of necessity	1	2	-	-
	PC7: Carry out starting/stopping/control switches are O.K. in case individual drive and alternative arrangements in case of group drive	1	2	-	-
	PC8: Knowledge on machine safety arrangement functioning correctly, in case of jam in the feed roller	1	2	-	-
	PC9: Carry out proper working of Spreader / Softener, Carding and drawing machine and uniformity of the sliver otherwise take corrective measure	1	2	-	-
	PC10: Carry out grade/quality wise (with proper colour coding) stocking of doffed spreader /carded roles at appropriate place for further processing	1	2	-	1
	PC11: Maintaining proper sliver path for ensuring perfect drawing (also checking of stop motion)	1	2	-	1
	PC12: Calculate wastages like sliver, fleece, droppings time to time and take weight to understand the corrective measures required	1	2	-	1
	PC13: Coordinate with maintenance people for proper setting of draft change pinion, twist pinion, felt bob position etc. for different count of yarn	1	2	-	1
	PC14: Identify jute sliver quality and jute yarn quality according to desired quality standards and specifications for the geotextile product	1	2	-	1
	PC15: Find out the causes of end break in spinning machine, end break in winding (warp and weft) machine and take the remedial measures for excessive end breakage	1	2	-	1
	PC16: Follow the instruction of Superior /shift In-charge during change of count and quality and Check frequently the quality of cop and spool and ensure that quality standards and specifications are maintained	1	1	-	1
	PC17: Explain Winding / Beaming machine and identification of parts	1	1	-	1
	PC18: Explain Sizing and its necessity and measurement of machine performance at weaving preparatory section	1	1	-	1
	PC19: Carry out correct take up of sizing paste by the yarn and squeezing properly, adjust the pressing roller accordingly	1	1	-	1

	PC20: Carry out moisture content (30%-35% for sackings & 18% -22% for hessian) & 1.5-2 % size application in beam in consultation with superiors as practiced in jute industry and ensure 70%. wet pick-up of size	1	1	-	-
	PC21: Carry out the weavers knot is of minimum size to pass easily through the heald wires and reed	1	1	-	-
	PC22: Carry out that all the stop motions, indication lamps , preventive mechanisms etc., function properly	1	1	-	-
	PC23: Explain Loom Motions and its classification Identification and function of required tools, equipment, and consumables needed for the Production.	1	1	-	-
	PC24: Correct the fabric defects like wrong drawing, wrong denting, end out , double end etc., immediately and also ensure that the other fabric defects too are corrected at the earliest, before continuing further production	1	1	-	-
	PC25: Rectify in case of any floats, should be able to " unweave " the same & should be able to run the machine without " starting mark or crack"	1	1	-	-
	Total Marks	**25**	**40**	**-**	**10**
IJIRA/N4005, V 1.0 Manufacturing of Geotextiles product with desired specification	PC 1: Knowledge of all technical terms and definition, Testing stds.,	3	4	-	1
	PC 2: Calculate MR%, Idea of RH%, Relation of RH% with MR%, QR. Calculation	3	4	-	1
	PC 3: Identify Statistical Quality Control for geotextile processing & preparation of control charts	3	4	-	1
	PC 4: Carry out various sampling technique for testing and sample collection from shop floor	3	4	-	1
	PC 5: Identify Testing standard and SOP of test method	3	4	-	1
	PC 6: Identify and demonstrate the Soil Basics	2	4	-	1
	PC 7: Identify and demonstrate the Soil testing such as Grain Size distribution, Atterberg Limit Test, CBR Test etc.	2	4	-	1
	PC 8: Carry out frequent checking of in-process materials and ensure quality management of delivered sliver, yarn and fabric during spinning, weaving & nonwoven machineries	2	4	-	1
	PC 9: Identify techniques for methods of process control	2	4	-	1
	PC 10: Identify & rectification of any deviation found in shop floor	2	4	-	1

	Total Marks	**25**	**40**	**-**	**10**
IJIRA/N4006, V 1.0 Basic maintenance of Geotextile machinery	PC 1: Describe the working principles of workshop machineries viz. lathe, shaping machine, drilling machine, milling machine and grinding machine	1	2	-	-
	PC 2: Identify, troubleshoot and rectify different faults in the machine and machine parts.	1	2	-	-
	PC 3: Repair, overhaul and assemble the parts in the machine with the help of blueprint.	1	2	-	-
	PC 4: Identify various types of gears- spur gear, bevel gear, helical gear, worm and worm wheel, rack and pinion and its calculations	1	2	-	-
	PC 5: Identify different types of gear used in production machinery and calculate power transmission takes place through gear	1	2	-	-
	PC 6: Explain different types of belt used in production machinery and their speed transmission takes place	1	2	-	-
	PC 7: Calculate Speed ratio through different types of gear and belt drive	1	2	-	-
	PC 8: Identify different bearing in jute machinery and their application	1	2	-	-
	PC 9: List out the consumables used for maintenance such as oil, lubrication and their purpose and types	1	2	-	-
	PC 10: Identifications of machine faults at different and its rectification	1	2	-	-
	PC 11: Dismantle the electrical system to replace faulty modules and perform soldering, crimping, harnessing to secure cables and components	1	1	-	-
	PC 12: Dismantle the mechanical equipment for maintenance and assemble them	1	1	-	-
	PC 13: Lubricate the equipment using the right amount of lubricant suggested in the manual	1	1	-	-
	PC14: Avoid waste, ascertain unused materials and components for disposal, store the seinan environmentally appropriate manner and prepare for disposal.	1	1	-	-
	PC 15: Spreader Maintenance – assembly of gill bars, causes of bar jam	1	1	-	-
	PC 16: Carding Maintenance – repining and gauging and pin diameter checking, roll former diameter setting	1	1	-	-
	PC17: Drawing Maintenance – repining, carriage setting and pressure adjustment of pressing roller.	1	1	-	-
	PC18: Spinning Maintenance – Dial gauge, height gauge.	1	1	-	-

	PC 19: Different components – Compressor, Pressure Gauge, Filter Regulator Lubricator, Valves and Actuators	1	1	-	-
	PC 20: Replace oil or grease as specified in maintenance procedure	1	1	-	1
	PC21: Re-assemble the equipment to working condition after completing maintenance	1	1	**-**	**1**
	PC 22:Follow the document procedure replaced component, consumables used, other details of maintenance for any reference	1	1	-	1
	PC 23: Carry out maintenance activities of all equipment at recommended frequency	1	1	-	1
	PC 24: Run the equipment and test its functionality in the presence of the concerned authority	1	1	**-**	**1**
	PC 25: Carry out Checking of Beaming machine – Leveling, Starch roller condition, Loom - Catcher pin setting, Damping - Nozzle and water flow, Paper bowl condition, Needle looper and spreader setting	-	1	-	1
	PC 26: Different components – Compressor, Pressure Gauge, Filter Regulator Lubricator, Valves and Actuators	-	1	-	1
	PC 28: Re-assemble the equipment to working condition after completing maintenance	-	1	-	**1**
	PC 29: Follow the document procedure replaced component, consumables used, other details of maintenance for any reference	-	1	-	1
	PC 30: Run the equipment and test its functionality in the presence of the concerned authority	-	1	-	1
	Total Marks	**25**	**40**	**-**	**10**
IJIRA/N4007, V 1.0 Product quality of Geotextiles	PC 1: Explain application & Installation Guidelines of Natural fibre based Geotextile in Roads	4	3	-	1
	PC 2: Explain application, & Installation Guidelines of Natural fibre based Geotextiles for Slope Protection	4	3	-	1
	PC 3: Explain application, & Installation Guidelines of Natural fibre based Geotextiles for River Bank Protection	4	3	-	1
	PC 4: Explain application & Installation Guidelines of Natural fibre based Geotextile in Road Construction	4	3	-	1
	PC 5: Understand various methods and devices that have been successfully used to monitor and evaluate geotextiles performance in the field.	4	4	-	1
	PC 6: Identify all types of geotextiles, and monitoring for all types of applications, the reinforcement area using geotextiles and geogrids is the	5	4	-	-

	most advanced.				
	Total Marks	**25**	**20**	**-**	**05**
IJIRA/N4008, V 1.0 Maintain health, safety and security at work place	PC1: Comply with health and safety related instructions applicable to the workplace	2	2	-	-
	PC 2: Use and maintain personal protective equipment such as “ear plug”, “ nose mask“, “head cap” etc., as per protocol	2	2	-	-
	PC 3:Carry out own activities in line with approved guidelines and procedures	2	2	-	-
	PC 4: Safely handle and remove waste	2	2	-	-
	PC 5:Follow environment management system related procedures	2	2	-	-
	PC 6:Identify and correct (if possible) malfunctions in machinery and equipment	2	2	-	-
	PC 7: Store materials and equipment in line with organizational requirements	2	1	-	-
	PC 8: Minimize health and safety risks to self and others due to own actions	2	1	-	-
	PC 9: Communicate the safety plan to everyone and attach disciplinary rules with the implementation	2	1	-	-
	PC 10: Monitor the workplace and work processes for potential risks and threat	2	1	-	1
	PC 11:Undertake first aid, fire-fighting and emergency response training, if asked to do so	2	1	-	1
	PC12:Take action based on instructions in the event of fire, emergencies or accidents	1	1	-	1
	PC13:Follow organization procedures for shutdown and evacuation when required	1	1	-	1
	PC14:Recognise other possible security issues existing in the workplace	1	1	-	1
	Total Marks	**25**	**20**	**-**	**05**
DGT/VSQ/N0101, V 1.0 Employability Skills	PC 1: Introduction to Employability Skills	3	2	-	-
	PC 2: Basic Professional skills	3	2	-	-
	PC 3: Work ethics and formal courtesy for Factory work	3	2	-	-
	PC 4: Career Development & Goal Setting	3	2	-	-
	PC 5: Communication Skills in local languages	3	2	-	-

	PC 6: Fundamental of Factory Laws	2	2	-	1
	PC 7: Essential Digital Skills	2	2	-	1
	PC 8: Entrepreneurship	2	2	-	1
	PC 9: Team Work	2	2	-	1
	PC 10: Getting ready for apprenticeship & Job	2	2	-	1
	Total Marks	**25**	**20**	**-**	**05**
	Grand Total	**200**	**240**	**-**	**60**

Annexure 7: Assessment Strategy

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

Mention the detailed assessment strategy in the provided template.

1. Assessment System Overview:
   - Batches assigned to IJIRA for conducting the assessment online through Portal with two probabledates for Assessment
   - IJIRA deploys the ToA certified Assessor for executing the assessment
   - IJIRA monitors the assessment process & records
2. Testing Environment:
   - Check the Assessment location, date and time
   - If the batch size is more than 30, then Assessment will spill over to consecutive days.
   - Check that the allotted time to the candidates to complete Theory & Practical Assessment is correct.
3. Assessment Quality Assurance levels/Framework:
   - Question bank is created by the Subject Matter Experts (SME) are verified by the other SME
   - Questions are mapped to the specified assessment criteria
   - Assessor must be ToA certified.
4. Types of evidence or evidence-gathering protocol:
   - reporting of the assessor from assessment location
   - Centre photographs with signboards and scheme specific branding
5. Method of verification or validation:
   - Surprise visit to the assessment location
6. Method for assessment documentation, archiving, and access
   - Hard copies of the documents are stored

On the Job:

1. Each module will be assessed separately.
2. The pass criteria is as per norms set by IJIRA in respect of Qualification Files
3. Tools of Assessment that will be used for assessing whether the candidate is having desired skills,understanding needs & requirements, and perform Soft Skills effectively:
   • Videos / portfolio of Trainees during OJT
4. Assessment of each Module will ensure that the candidate is able to:

- Effective engagement with the stakeholders
- Understand the working of various tools and equipment
- Deliver the job assigned to him/her in conformity with job responsibility ascribed to Qualification File.

Annexure 8: Multiple Entry and Exit

NA

Annexure9: Acronym and Glossary

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 alsodo.
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 givenstandards
Qualification File	A Qualification File is a template designed to capture necessary information of a Qualificationfrom 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 10: Supporting Document

Model Curriculum (Attached)

Annexure 11: Supporting Document – Career Progression

The steps followed to determine smooth entry and progression to other qualification in this and/ or another sector/s are –

1. After discussing about proposed job role and responsibilities to develop perception about career progression, relevant progressions to other qualifications were determined.
2. Further, examined the relevant occupational charts to validate the progression obtained through point 1.
3. The occupational requirements and opportunities were taken in consideration to strengthen the progression path.

Potential Progression path –

Technician in Geotextile and its Application (Natural Fibre)

Annexure 12: Any Other Document you wish to submit - NA