QUALIFICATION FILE – Standalone NOS

<Rope Operations, Tactics and Rescue (ROTAR)>

☐ Horizontal/Generic ☒ Vertical/Specialization

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

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

NCrF/NSQF Level: 4

Submitted By:

< Telecom Sector Skill Council>

< Telephone: 0124-4148029 >
< Email: tssc@tsscindia.com >

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Section 1: Basic Details

<table>
<tr><td>1.</td><td>NOS-Qualification Name</td><td colspan="2">Rope Operations, Tactics and Rescue (ROTAR)</td></tr>
<tr><td>2.</td><td>Sector/s</td><td colspan="2">Telecom</td></tr>
<tr><td>3.</td><td>Type of Qualification ☒ New ☐ Revised</td><td>NQR Code & version of the existing /previous qualification: (change to previous, once approved)</td><td>Qualification Name of the existing/previous version: (previous, once approved)</td></tr>
<tr><td>4.</td><td>National Qualification Register (NQR) Code & Version (Will be issued after NSQC approval.)</td><td>NG-04-TL-02986-2024-V1-TSSC</td><td>5. NCrF/NSQF Level:4</td></tr>
<tr><td>6.</td><td>Brief Description of the Standalone NOS</td><td colspan="2">The Rope Access Technician is aimed at those who have required the skill and knowledge to gain access to difficult areas of height and confined space using ropes and associated equipment. This role involves performing a wide range of repair, maintenance, and inspection tasks across various industries, including telecommunications, offshore oil and gas, renewable energy, power and petrochemical, shipping, and harbors.</td></tr>
<tr><td>7.</td><td>Eligibility Criteria for Entry for a 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>12th Grade Pass</td><td>1.5-year Relevant Experience</td></tr>
<tr><td>2.</td><td>10th Grade Pass</td><td>3-year Relevant Experience</td></tr>
</table>
b. Age <Please specify age only in case of any legal restrictions>: 18</td></tr>
<tr><td>8.</td><td>Credits Assigned to this NOS-Qualification, Subject to Assessment (as per National Credit Framework (NCrF))</td><td>2</td><td>9. Common Cost Norm Category (I/II/III) (wherever applicable): I</td></tr>
<tr><td>10.</td><td>Any Licensing Requirements for Undertaking Training on This Qualification (wherever applicable)</td><td colspan="2">Physically fit and able to participate in practical activities.</td></tr>
</table>

<table>
<tr><td>11.</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>☒ Offline Only ☐ Online Only ☐ Blended
<table><tr><th>Training Delivery Mode</th><th>Theory (Hours)</th><th>Practical (Hours)</th><th>Total (Hours)</th></tr><tr><td>Classroom (offline)</td><td>12:00</td><td>48:00</td><td>60:00</td></tr><tr><td>Online</td><td></td><td></td><td></td></tr></table>(Refer Blended Learning Annexure for details)</td></tr>
<tr><td>12.</td><td>Assessment Criteria</td><td><table><tr><th>Theory (Marks)</th><th>Practical (Marks)</th><th>Project (Marks)</th><th>Viva (Marks)</th><th>Total (Marks)</th><th>Passing %age</th></tr><tr><td>50</td><td>150</td><td>-</td><td>-</td><td>200</td><td>-</td></tr></table>Minimum Pass Percentage – Aggregate at qualification level Theory: <u>80 %</u> and Practical: <u>100 %</u>
(Every Trainee should score specified minimum aggregate passing percentages in both theory and practical at qualification level to successfully clear the assessment.)</td></tr>
<tr><td>13.</td><td>Is the NOS Amenable to Persons with Disability</td><td>☐ Yes ☒ No If “Yes”, specify applicable type of Disability:</td></tr>
<tr><td>14.</td><td>Progression Path After Attaining the Qualification, wherever applicable (Please show Professional and Academic progression)</td><td>Advanced Rope Operations, Tactics & Rescue (Level-4.5)</td></tr>
<tr><td>15.</td><td>How participation of women will be encouraged?</td><td>Yes, Women's engagement must be encouraged in order to advance gender equality and guarantee that they have equal opportunity in all spheres of society. In addition to training and development programs, it's critical to offer networking, mentoring, and knowledge. Women might be inspired and encouraged to seek jobs in this industry by flexible work arrangements and the promotion of successful women in this role. By implementing policies and procedures that promote work-life balance, equal compensation and advancement opportunities, and a polite and safe work environment, organizations may foster a culture of inclusion and diversity that will make women feel appreciated and accepted in these positions.</td></tr>
</table>

16.	**Other Indian languages in which the Qualification & Model Curriculum are being submitted**	*Hindi*	
17.	**Is similar NOS available on NQR-if yes, justification for this qualification**	**☐ Yes ☒ No URLs of similar Qualifications:**	
18.	**Name and Contact Details Submitting / Awarding Body SPOC & OEM** *(In case of CS or MS, provide details of both Lead AB & Supporting ABs)*	**Name: Pankaj Bajaj** **Email: standards@tsscindia.com** **Contact No.: 0124-4148029** **Website: https://www.tsscindia.com**	
19.	**Final Approval Date by NSQC: 27th August 2024**	**20. Validity Duration: 3 years**	**21. Next Review Date: 27th August 2027**

Section 2: Training Related

1.	**Trainer's Qualification and experience in the relevant sector (in years)** *(as per NCVET guidelines)*	Graduate (any stream) with 3 years of industry relevant experience and 2 years of teaching experience **OR** 12th Pass with 5 years of industry relevant experience and 4 years of teaching experience
2.	**Master Trainer's Qualification and experience in the relevant sector (in years)** *(as per NCVET guidelines)*	Graduate (any stream) with 5 years of industry relevant experience and 4 years of teaching experience **OR** 12th Pass with 10 years of industry relevant experience and 8 years of teaching experience
3.	**Tools and Equipment Required for the Training**	☒Yes ☐No (*If "Yes", details to be provided in Annexure)*
4.	**In Case of Revised NOS, details of Any Upskilling Required for Trainer**	-N.A.

Section 3: Assessment Related

1.	**Assessor's Qualification and experience in relevant sector (in years)** *(as per NCVET guidelines)*	Graduate (any stream) with 3 years of industry relevant experience and 2 years of teaching experience **OR** 12th Pass with 5 years of industry relevant experience and 4 years of teaching experience

2.	**Proctor's Qualification and experience in relevant sector (in years)** *(as per NCVET guidelines), (wherever applicable)*	Graduate (any stream) with 3 years of industry relevant experience and 2 years of teaching experience **OR** 12th Pass with 5 years of industry relevant experience and 4 years of teaching experience
3.	**Lead Assessor's/Proctor's Qualification and experience in relevant sector (in years)** *(as per NCVET guidelines)*	Graduate (any stream) with5 years of industry relevant experience and 4 years of teaching experience **OR** 12th Pass with 10 years of industry relevant experience and 8 years of teaching experience
4.	**Assessment Mode** *(Specify the assessment mode)*	offline
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 4: Evidence of the Need for the Standalone NOS

Provide Annexure/Supporting documents name.

1.	Government /Industry initiatives/ requirement (Yes/No): Yes
2.	Number of Industry validation provided: *< Specify both Annexure & Supporting document details for Industry validation summary & Industry validations (as per format)>* No
3.	Estimated number of people to be trained: *4000*
4.	Evidence of Concurrence/Consultation with Line/State Departments (In case of regulated sectors): (Yes/No): *< Select the relevant options and specify Supporting document details>* If "No", why:

Section 5: Annexure & Supporting Documents Check List

Specify Annexure Name / Supporting document file name

1.	**Annexure:** NCrF/NSQF level justification based on NCrF/NSQF descriptors *(Mandatory)*	Yes
2.	**Annexure:** List of tools and equipment relevant for NOS *(Mandatory, except in case of online course)*	Yes
3.	**Annexure:** Performance and Assessment Criteria *(Mandatory)*	*Yes*
4.	**Annexure:** Assessment Strategy *(Mandatory)*	*Yes*
5.	**Annexure:** Blended Learning *(Mandatory, in case selected Mode of delivery is Blended Learning)*	*No*
6.	**Annexure:** Acronym and Glossary *(Optional)*	*Yes*
7.	**Annexure/Supporting Document:** Standalone NOS-Performance Criteria Details Annexure/Document with PC-wise detailing as per NOS format (Mandatory- Public view)	*Yes*
8.	**Supporting Document:** Model Curriculum *(Mandatory – Public view)*	*No*

Annexure: Evidence of Level

NCrF/NSQF Level Descriptors	Key requirements of the job role/ outcome of the qualification	How the job role/ outcomes relate to the NCrF/NSQF level descriptor	NCrF/NSQF Level
Professional Theoretical Knowledge/Process	Job that requires well developed skill, with clear choice of procedures in familiar context. • Understanding the basics of rope operations, tactics, and rescue equipment • Knowledge of intended usage and limitations of various rope-related equipment • Familiarity with industry standards and regulations for rope operations • Understanding the principles of mechanical advantage in rescue operations • Knowledge of different types of rope and their specific uses	The job involves a comprehensive understanding of theoretical concepts and practical skills essential for effective rope operations, tactics, and rescue (ROTAR). As outlined in the job requirements, the role necessitates a deep knowledge of rope operations, including identifying and listing essential tactics and rescue equipment, understanding the usage and limitations of various rope-related equipment, and adhering to industry standards and regulations. This theoretical foundation ensures that individuals can understand the principles of mechanical advantage, different types of ropes and their specific uses, and perform pre-use inspections. Such knowledge aligns with the NCrF/NSQF level 4 descriptor, which emphasizes the necessity for specialized technical knowledge and the ability to apply it in various contexts.	4
Professional and Technical Skills/ Expertise/ Professional Knowledge	• Performing pre-use inspections of equipment for safety and functionality • Recognizing potential hazards and conducting thorough risk assessments • Conducting Toolbox Talks to communicate risk assessments and safety procedures • Identifying and mitigating environmental hazards related to rope operations • Implementing measures to prevent falls and accidents during rope operations	The job requires a range of professional and technical skills integral to ROTAR, as highlighted by the job outcomes. These skills encompass the ability to tie and apply basic knots, navigate past deviation anchors, and perform rigging and anchoring. Additionally, expertise in selecting appropriate personal protective equipment, conducting risk assessments, and implementing fall prevention measures is crucial. The professional knowledge required also includes proficiency in using belay devices and executing complex rescue scenarios. This expertise aligns with the NCrF/NSQF	4

	• Implement measures to avoid Suspension Intolerance using different techniques & equipment for suspended casualty. • Evaluating and selecting appropriate personal protective equipment for different tasks • Maintaining situational awareness to enhance safety during operations	level 4 descriptor, emphasizing the application of theoretical and practical skills in a specialized field.	
Employment Readiness & Entrepreneurship **Skills & Mind-set/Professional Skill**	**A range of cognitive and practical skills required to accomplish tasks and solve problems by selecting and applying basic methods, tools, materials and information.** • Tying and applying basic knots required for rope tactics and rescue operations • Safely and efficiently ascending and descending ropes, including past deviation anchors and over edges • Utilizing advanced knots and hitches for complex rescue scenarios • Demonstrating proficiency in the use of belay devices and techniques • Performing rope-to-rope changeovers smoothly	The role of ROTAR demands strong professional skills that ensure employment readiness and foster an entrepreneurial mindset. These skills include the ability to conduct effective Toolbox Talks to communicate safety procedures, maintain situational awareness, and manage equipment and personnel during rescues. Moreover, individuals must be capable of coordinating with other teams or emergency services and using communication devices effectively. The job also involves performing self-rescue techniques and providing first aid to casualties. These skills align with the NCrF/NSQF level 4 descriptor, which highlights the importance of professional skills for employment readiness and the capacity for independent operation and decision-making.	4
Broad Learning Outcomes/Core Skill	**Desired mathematical skill, understanding of social, political, and some skill of collecting and organizing information, communication.** • Selecting appropriate anchorage structures and rigging basic anchor systems suitable for rescue operations	The job entails broad learning outcomes and core skills crucial for effective performance in ROTAR. These include the ability to perform thorough risk assessments, communicate clearly and effectively with team members, and maintain situational awareness. Additionally, individuals must demonstrate proficiency in ascending and descending ropes, conducting edge transitions, and	4

	• Establishing and utilizing rope protection and edge protection • Developing strategies for working in confined spaces using rope systems • Using fall arrest equipment correctly, conducting rescues from various rope maneuvers, and providing basic first aid • Implement measures to avoid Suspension Intolerance using different techniques & equipment for suspended casualty.	performing equipment maintenance. The core skills also encompass providing training and mentorship and conducting post-rescue debriefs to improve future performance. These learning outcomes align with the NCrF/NSQF level 4 descriptor, which emphasizes the development of broad knowledge and practical skills applicable in various contexts.	
Responsibility	**Responsibility for own work and learning and some responsibility for other's works and learning.** • Demonstrating proper use and care of all rope and rescue equipment, performing regular checks, and identifying signs of wear and tear • Communicating clearly and effectively with team members, coordinating with other teams or emergency services, and practicing safe techniques for moving equipment and personnel during rescues • Training regularly to maintain proficiency, providing training and mentorship to less experienced team members, and staying updated with the latest advancements in rope operations and rescue • Conducting debriefs to identify lessons learned and improve future performance	The job involves significant responsibility, as individuals must ensure the safety and effectiveness of rope operations, tactics, and rescue. This includes performing pre-use inspections, identifying and mitigating environmental hazards, and implementing measures to prevent falls and accidents. Additionally, the role requires managing casualties during rescue operations, performing rescues from different situations, and maintaining equipment. The responsibility also extends to providing training and mentorship and staying updated with the latest advancements in the field. These responsibilities align with the NCrF/NSQF level 4 descriptor, which emphasizes the ability to take responsibility for the work and outcomes of others and ensure adherence to safety standards and best practices.	4

Annexure: Tools and Equipment (lab set-up)

List of Tools and Equipment

Batch Size: 10 Candidates

S. No.	Tool / Equipment Name	Specification	Image	Quantity for specified Batch size
1.	Kernmantle Rope	EN1891 (11mm recommended)		20
2.	Anchor Slings (wire rope)	EN 795, EN566, IS 3521: Part-7		40
3.	Tri-lock Steel Carabiners	EN362, IS3521: Part-5 with 30kN minimum Breaking Strength		70
4.	Full Body Harness	EN361, EN358, EN813, IS3521: Part-1		12

5.	Rope Access Helmet	EN397, EN12492		12
6.	Back-up Device	EN12841, EN353-2 IS3521: Part-4, Must be certified for 2-person simultaneous use for rescue		24
7.	Descender	EN341, EN12841, IS3521: Part-9 Must be certified for 2-person simultaneous use for rescue		12
8.	Aluminum Carabiners	EN362, IS3521: Part-5		120
9.	Rope Clamp/ Hand Ascender	EN567		12

10.	Chest Ascender	EN567		12
11.	Short Link/ sling	EN354		36
12.	Cows Tail	EN892 (10mm. Dia)		36
13.	Foot Loop	NA		24
14.	Pulleys: Single (mobile)	EN12278, UIAA		2
15.	Pulleys: Double (mobile)	EN12278, UIAA		4

16.	Tandem Pulleys	EN12278, UIAA		2
17.	Rescue Stretcher	3rd party Certificate		1
18.	Fall Arrest Lanyards (1M)	EN354, EN355, IS3521: Part-2		12
19.	Work Positioning Lanyards	EN358		12
20.	Tri-pod	EN795, IS3521: Part-7		1
21.	K-Pod	EN795, IS3521: Part-7		1

22.	Rescue Winch	EN1496		2
23.	Retractable Retrieval Block	EN360, EN1496, IS3521: Part-3		2
24.	Suspension Intolerance Strap	NA		2 Pairs
25.	Easy Seat	NA		2

Classroom Aids

The aids required to conduct sessions in the classroom are:

1. White Board, Markers,
2. Projector, PC etc.

Annexure: Industry Validations Summary

S. No	Organization Name	Representative Name	Designation	Contact Address	Contact Phone No	E-mail ID	LinkedIn Profile *(if available)*

Annexure: Training Details

Training Projections:

Year	Estimated Training # of Total Candidates	Estimated training # of Women	Estimated training # of People with Disability
2024-25	500	50	0
2025-26	1500	150	0
2026-27	2000	200	0

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

Annexure: Blended Learning

Blended Learning Estimated Ratio & Recommended Tools: NA

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 NOS	List Recommended Tools – for all Selected Components	Offline: Online Ratio
1	☐Theory/ Lectures - Imparting theoretical and conceptual knowledge		
2	☐Imparting Soft Skills, Life Skills and Employability Skills /Mentorship to Learners		
3	☐Showing Practical Demonstrations to the learners		
4	☐Imparting Practical Hands-on Skills/ Lab Work/ workshop/ shop floor training		
5	☐Tutorials/ Assignments/ Drill/ Practice		
6	☐Proctored Monitoring/ Assessment/ Evaluation/ Examinations		
7	☐On the Job Training (OJT)/ Project Work Internship/ Candidate Training		

Annexure: Standalone NOS- Performance Criteria details

1. **Description:** The Rope Access Technician is aimed at those who have required the skill and knowledge to gain access to difficult areas of height and confined space using ropes and associated equipment. This role involves performing a wide range of repair, maintenance, and inspection tasks across various industries, including telecommunications, offshore oil and gas, renewable energy, power and petrochemical, shipping, and harbors.

2. Scope:

The scope covers the following:

- Understand the basics of rope operations
- Pre-Operation and Safety
- Select and execute appropriate knots and rope techniques
- Perform rigging and anchoring
- Monitor fall arrest and rescue
- Equipment management and maintenance
- Teamwork and communication
- Professional development

3. Elements and Performance Criteria

< Understand the basics of rope operations>

To be competent, the user/individual on the job must be able to:

PC1. Identify and list essential rope operations, tactics, and rescue equipment

PC2. Explain the intended usage and limitations of various rope-related equipment

PC3. Understand and comply with industry standards and regulations for rope operations

PC4. Understand the principles of mechanical advantage in rescue operations

PC5. Demonstrate knowledge of different types of rope and their specific uses

< Pre-Operation and Safety>

PC6. Perform pre-use inspections of all equipment to ensure safety and functionality

PC7. Recognize potential hazards associated with rope operations and perform thorough risk assessments

PC8. Conduct effective Toolbox Talks to communicate risk assessments and safety procedures

PC9. Identify and mitigate environmental hazards related to rope operations
PC10. Implement measures to prevent falls and accidents during rope operations
PC11. Evaluate and select appropriate personal protective equipment for different tasks
PC12. Maintain situational awareness to enhance safety during rope operations
< Select and execute appropriate knots and rope techniques>
PC13. Tie and apply basic knots required for rope tactics and rescue operations
PC14. Pass knots while ascending or descending ropes
PC15. Navigate past deviation anchors during rope operations
PC16. Ascend and descend over edges with proper technique
PC17. Utilize advanced knots and hitches for complex rescue scenarios
PC18. Demonstrate proficiency in the use of belay devices and techniques
PC19. Conduct edge transitions safely with proper rope management
PC20. Ascend ropes safely and efficiently
PC21. Descend ropes safely and efficiently
PC22. Perform rope-to-rope changeovers smoothly
< Perform rigging and anchoring>
PC23. Select appropriate anchorage structures and anchor devices for different scenarios
PC24. Rig a basic anchor system suitable for rope tactics and rescue operations
PC25. Set up rigging for specific rescue scenarios
PC26. Establish and utilize rope protection and edge protection where necessary
PC27. Develop strategies for working in confined spaces using rope systems
< Monitor fall arrest and rescue>
PC28. Use fall arrest equipment correctly during ladder climbing exercises
PC29. Demonstrate proper work positioning techniques while suspended on ropes
PC30. Conduct rescues from different rope maneuver situations effectively
PC31. Rescue a casualty from a ladder using proper techniques
PC32. Perform a buddy rescue from nearby ropes when the casualty is on a descending device
PC33. Execute a buddy rescue from the same rope when the casualty is on a descending device
PC34. Manage casualties during rescue operations to minimize further injury
PC35. Provide basic first aid to casualties post-rescue
PC36. Manage and care for casualties during prolonged rescue operations

PC37. Perform self-rescue techniques in the event of an emergency

< Equipment management and maintenance>

PC38. Demonstrate proper use and care of all rope and rescue equipment

PC39. Implement best practices for equipment storage and maintenance

PC40. Perform regular checks and maintenance on fall arrest and other safety equipment

PC41. Identify signs of equipment wear and tear and take appropriate action

< Teamwork and communication>

PC42. Communicate clearly and effectively with team members during operations

PC43. Coordinate with other teams or emergency services during complex rescue scenarios

PC44. Use communication devices effectively during operations to ensure team coordination

PC45. Practice safe techniques for moving equipment and personnel during rescues

< Professional development>

PC46. Train and practice regularly to maintain proficiency in rope tactics and rescue

PC47. Provide training and mentorship to less experienced team members

PC48. Conduct post-rescue debriefs to identify lessons learned and improve future performance

PC49. Stay updated with the latest advancements and techniques in rope operations and rescue

PC50. Evaluate and improve personal and team performance after training exercises

4. Knowledge and Understanding (KU):

The individual on the job needs to know and understand:

KU 1. Different types of ropes (static, dynamic) and their properties (strength, diameter, elongation)

KU 2. Essential rope access equipment (carabiners, harnesses, ascenders, descenders, pulleys) and their functions

KU 3. Safe working loads and limitations of various equipment

KU 4. Industry standards and regulations governing rope access and rescue operations (e.g., ANSI, EN)

KU 5. Principles of mechanical advantage (levers, pulleys) for maximizing efficiency in rope systems

KU 6. Pre-inspection procedures to ensure equipment functionality and identify potential defects

KU 7. Common hazards associated with rope operations (falling objects, sharp edges, electrical wires)

KU 8. Risk assessment techniques to identify and mitigate potential dangers

KU 9. Effective communication methods for conducting toolbox talks on safety procedures

KU 10. Environmental factors impacting rope operations (weather, temperature, wind)
KU 11. Fall prevention methods (anchoring systems, fall arrest equipment)
KU 12. Selection of appropriate personal protective equipment (PPE) for specific tasks (helmets, gloves, footwear)
KU 13. Importance of maintaining situational awareness to identify changing hazards
KU 14. Tying and applying basic knots securely (e.g., figure eight, bowline, clove hitch)
KU 15. Techniques for passing knots while ascending or descending ropes
KU 16. Safe navigation around deviation anchors (changing rope direction points)
KU 17. Proper ascending and descending techniques over edges
KU 18. Advanced knots and hitches for complex rescue scenarios (e.g., bowline, figure of 8, prusik knot)
KU 19. Proficiency in using belay devices to control and arrest falls
KU 20. Safe edge transition methods with proper rope management
KU 21. Efficient rope ascent and descent methods
KU 22. Techniques for performing smooth rope-to-rope changeovers
KU 23. Selecting appropriate anchor points and devices based on load requirements and environment
KU 24. Rigging basic anchor systems for various rope operations
KU 25. Setting up specific rigging configurations for different rescue scenarios
KU 26. Implementing rope protection and edge protection to minimize abrasion
KU 27. Strategies for safe rope system utilization in confined spaces

5. Generic Skills (GS):

User/individual on the job needs to know how to:

GS 1. Understanding of fundamental physics principles like mechanical advantage, friction, and forces acting on ropes and anchors.
GS 2. Knowledge of relevant regulations and standards for safe rope operations in their specific field.
GS 3. Ability to identify and understand the purpose and limitations of various ropes, knots, rigging components, and personal protective equipment (PPE).
GS 4. Identifying potential hazards in rope operations and developing plans to mitigate those risks.
GS 5. Evaluating different rope techniques and selecting the most appropriate one for the situation.
GS 6. Making quick and sound decisions under pressure to ensure the safety of themselves and others during rope operations.
GS 7. Clearly explaining technical concepts and procedures to teammates.

GS 8. Maintaining constant awareness of their surroundings and the actions of others to identify and avoid hazards.
GS 9. Performing basic calculations related to weight loads, mechanical advantage, and rope lengths.
GS 10. Adjusting plans and techniques based on changing weather conditions, environmental factors, or unexpected situations.

Annexure: Assessment Criteria

Detailed PC-wise assessment criteria and assessment marks for the NOS are as follows:

S. No.	Assessment Criteria for Performance Criteria	Theory Marks	Practical Marks	Project Marks	Viva Marks
	Understand the basics of rope operations	**15**	**-**	**-**	**-**
PC 1.	identify and list essential rope operations, tactics, and rescue equipment	3	-	-	-
PC 2.	Explain the intended usage and limitations of various rope-related equipment	3	-	-	-
PC 3.	Understand and comply with industry standards and regulations for rope operations	2	-	-	-
PC 4.	Understand the principles of mechanical advantage in rescue operations	5	-	-	-
PC 5.	Demonstrate knowledge of different types of rope and their specific uses	2	-	-	-
	Pre-Operation and Safety	**15**	**15**	**-**	**-**
PC6.	Perform pre-use inspections of all equipment to ensure safety and functionality	-	5	-	-
PC7.	Recognize potential hazards associated with rope operations and perform thorough risk assessments	5	-	-	-
PC8.	Conduct effective Toolbox Talks to communicate risk assessments and safety procedures	3	-	-	-
PC9.	Identify and mitigate environmental hazards related to rope operations	4	-	-	-
PC10.	Implement measures to prevent falls and accidents during rope operations	-	5	-	-
PC11.	Evaluate and select appropriate personal protective equipment for different tasks	-	5	-	-
PC12.	Maintain situational awareness to enhance safety during rope operations	3	-	-	-
	Select and execute appropriate knots and rope techniques	**-**	**50**	**-**	**-**
PC13.	Tie and apply basic knots required for rope tactics and rescue operations	-	5	-	-
PC14.	Pass knots while ascending or descending ropes	-	5	-	-
PC15.	Navigate past deviation anchors during rope operations	-	5	-	-
PC16.	Ascend and descend over edges with proper technique	-	5	-	-
PC17.	Utilize advanced knots and hitches for complex rescue scenarios	-	5	-	-
PC18.	Demonstrate proficiency in the use of belay devices and techniques	-	5	-	-

PC19.	Conduct edge transitions safely with proper rope management	-	5	-	-
PC20.	Ascend ropes safely and efficiently	-	5	-	-
PC21.	Descend ropes safely and efficiently	-	5	-	-
PC22.	Perform rope-to-rope changeovers smoothly	-	5	-	-
	Perform rigging and anchoring	**-**	**24**	**-**	**-**
PC23.	Select appropriate anchorage structures and anchor devices for different scenarios	-	4	-	-
PC24.	Rig a basic anchor system suitable for rope tactics and rescue operations	-	3	-	-
PC25.	Set up rigging for specific rescue scenarios	-	10	-	-
PC26.	Establish and utilize rope protection and edge protection where necessary	-	3	-	-
PC27.	Develop strategies for working in confined spaces using rope systems	-	4	-	-
	Monitor fall arrest and rescue	**-**	**45**	**-**	**-**
PC28.	Use fall arrest equipment correctly during ladder climbing exercises	-	5	-	-
PC29.	Demonstrate proper work positioning techniques while suspended on ropes	-	5	-	-
PC30.	Conduct rescues from different rope maneuver situations effectively	-	5	-	-
PC31.	Rescue a casualty from a ladder using proper techniques	-	5	-	-
PC32	Perform a buddy rescue from nearby ropes when the casualty is on a descending device	-	5	-	-
PC33.	Execute a buddy rescue from the same rope when the casualty is on a descending device		5	-	-
PC34.	Manage casualties during rescue operations to minimize further injury		2	-	-
PC35.	Provide basic first aid to casualties post-rescue		3	-	-
PC36.	Manage and care for casualties during prolonged rescue operations	-	5	-	-
PC37.	Perform self-rescue techniques in the event of an emergency	-	5	-	-
	Equipment management and maintenance	**4**	**6**	**-**	**-**
PC38.	Demonstrate proper use and care of all rope and rescue equipment		2	-	-
PC39.	Implement best practices for equipment storage and maintenance	4	-	-	-
PC40.	Perform regular checks and maintenance on fall arrest and other safety equipment		2	-	-
PC41.	Identify signs of equipment wear and tear and take appropriate action		2	-	-
	Teamwork and communication	**-**	**10**	**-**	**-**
PC42.	Communicate clearly and effectively with team members during operations		2	-	-
PC43.	Coordinate with other teams or emergency services during complex rescue scenarios		2	-	-
PC44.	Use communication devices effectively during operations to ensure team coordination		2	-	-
PC45.	Practice safe techniques for moving equipment and personnel during rescues		4	-	-
	Professional development	**16**	**-**	**-**	**-**

PC46.	Train and practice regularly to maintain proficiency in rope tactics and rescue	4	-	-	-
PC47.	Provide training and mentorship to less experienced team members	4	-	-	-
PC48.	Conduct post-rescue debriefs to identify lessons learned and improve future performance	4	-	-	-
PC49.	Stay updated with the latest advancements and techniques in rope operations and rescue	2	-	-	-
PC50.	Evaluate and improve personal and team performance after training exercises	2	-	-	-
Total Marks		**50**	**150**	-	-

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 SIP or email
- Assessment agencies send the assessment confirmation to VTP/TC looping SSC
- Assessment agency deploys the ToA certified Assessor for executing the assessment
- SSC monitors the assessment process & records

2. Testing Environment:

- Check the Assessment location, date and time
- If the batch size is 10, then there should be 1 Assessors
- 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 & trainer must be ToT Certified

4. Types of evidence or evidence-gathering protocol:

- Time-stamped & geotagged 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 …>

7. Assessment Criteria:

- Assessment shall only be carried out by qualified Assessors under Skill India Digital
- A maximum of 10 participants are allowed for a one-day assessment.
- All the participants are required to perform the activities as per the module and assessor's checklist
- The assessment will consist of both theoretical and practical with the duration of 8Hrs in the day
- A minimum mark of 80% in theory and 100% *in practical is required for the successful completion of the assessment- The theory question paper will consist of Multiple Choice, True or False & Short Answers. The percentage of Practical assessment is determined by the amount of minor and major errors made during assessment.
  *100 % in practical means no Major discrepancies and not more than 2 Minor discrepancies. The complete list of Major & Minor discrepancies is listed.
- Eligibility for assessment is restricted to those who have completed the seven-day training.

Annexure: Acronym and Glossary

Acronym

Acronym	Description
AA	Assessment Agency
AB	Awarding Body
NCrF	National Credit Framework
NOS	National Occupational Standard(s)
NQR	National Qualification Register
NSQF	National Skills Qualifications Framework

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.