



## QUALIFICATION FILE

### SCAFFOLD DESIGN ENGINEER

- 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: 6.0

Submitted By:

**SAFETY SKILL DEVELOPMENT FOUNDATION**

**D-507, LightHouse, Town Square, Sector 82-A, Vatika India Next,**

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**Section 1: Basic Details**

1.	<b>Qualification Name</b>	Scaffold Design Engineer																
2.	<b>Sector/s</b>	Construction, Infrastructure, Real estate, Iron & Steel, Mining, Logistics, Hydrocarbon, and others.																
3.	<b>Type of Qualification:</b> <input checked="" type="checkbox"/> New <input type="checkbox"/> Revised <input type="checkbox"/> <b>Has Electives/Options</b> <input type="checkbox"/> OEM	<b>NQR Code &amp; version of existing/previous qualification:</b> <i>(change to previous, once approved)</i>	<b>Qualification Name of existing/previous version:</b>															
4.	<b>a. OEM Name</b> <b>b. Qualification Name</b> <i>(Wherever applicable)</i>																	
5.	<b>National Qualification Register (NQR) Code &amp;Version</b> <i>(Will be issued after NSQC approval)</i>	QC-06-CO-02971-2024-V1-SSDF	<b>6. NCrF/NSQF Level:</b> 6.0															
7.	<b>Award (Certificate/Diploma/Advance Diploma/ Any Other)</b> <i>(Wherever applicable specify multiple entry/exits also &amp; provide details in annexure)</i>	Certificate																
8.	<b>Brief Description of the Qualification</b>	A Scaffold Design Engineer is responsible for creating safe and efficient scaffold designs using industry standards and codes utilizes scaffold structural design software and computer-aided design (CAD) & systems to develop accurate scaffold drawings. The design engineer calculates loads in accordance with national & international standards and analyzes scaffold structures using design software like STAAD Pro software and have good understanding of scaffold specifications, drawings, Indian and international standard codes to ensure compliance and safety in scaffold designs.																
9.	<b>Eligibility Criteria for Entry for Student/Trainee/Learner/Employee</b>	<b>a. Entry Qualification &amp; Relevant Experience:</b> <table border="1"> <thead> <tr> <th>S. No.</th> <th>Academic/Skill Qualification (with Specialization - if applicable)</th> <th>Required Experience (with Specialization - if applicable)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Completed 4 year UG in relevant field</td> <td>2</td> </tr> <tr> <td>2</td> <td>Completed 3 year UG in relevant field</td> <td>3</td> </tr> <tr> <td>3</td> <td>Previous relevant Qualification of NSQF Level 5.5</td> <td>1.5</td> </tr> <tr> <td>4</td> <td>Previous relevant Qualification of NSQF Level 5</td> <td>3</td> </tr> </tbody> </table> <b>b. Age-</b> 18 Years		S. No.	Academic/Skill Qualification (with Specialization - if applicable)	Required Experience (with Specialization - if applicable)	1	Completed 4 year UG in relevant field	2	2	Completed 3 year UG in relevant field	3	3	Previous relevant Qualification of NSQF Level 5.5	1.5	4	Previous relevant Qualification of NSQF Level 5	3
S. No.	Academic/Skill Qualification (with Specialization - if applicable)	Required Experience (with Specialization - if applicable)																
1	Completed 4 year UG in relevant field	2																
2	Completed 3 year UG in relevant field	3																
3	Previous relevant Qualification of NSQF Level 5.5	1.5																
4	Previous relevant Qualification of NSQF Level 5	3																
10.	<b>Credits Assigned to this Qualification, Subject to Assessment</b> <i>(as per National Credit Framework (NCrF))</i>	23	<b>11. Common Cost Norm Category (I/II/III)</b> <i>(wherever applicable):</i> I															

12.	<b>Any Licensing requirements for Undertaking Training on This Qualification</b> ( <i>wherever applicable</i> )	No																		
13.	<b>Training Duration by Modes of Training Delivery</b> ( <i>Specify Total Duration as per selected training delivery modes and as per requirement of the qualification</i> )	<input checked="" type="checkbox"/> Offline <input type="checkbox"/> Online <input type="checkbox"/> Blended <table border="1"> <thead> <tr> <th>Training Delivery Modes</th> <th>Theory (Hours)</th> <th>Practical (Hours)</th> <th>OJT Mandatory (Hours)</th> <th>Total (Hours)</th> </tr> </thead> <tbody> <tr> <td><b>Classroom (offline)</b></td> <td>414</td> <td>156</td> <td>120</td> <td>690</td> </tr> <tr> <td><b>Online</b></td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> </tr> </tbody> </table> <p>(Refer Blended Learning Annexure for details)</p>				Training Delivery Modes	Theory (Hours)	Practical (Hours)	OJT Mandatory (Hours)	Total (Hours)	<b>Classroom (offline)</b>	414	156	120	690	<b>Online</b>	-	-	-	-
Training Delivery Modes	Theory (Hours)	Practical (Hours)	OJT Mandatory (Hours)	Total (Hours)																
<b>Classroom (offline)</b>	414	156	120	690																
<b>Online</b>	-	-	-	-																
14.	<b>Aligned to NCO/ISCO Code/s</b> ( <i>if no code is available mention the same</i> )	NCO-2015/2141.0100 ; Works Inspector, Engineering /Inspection Engineer																		
15.	<b>Progression path after attaining the qualification</b> ( <i>Please show Professional and Academic progression</i> )	<b>Vertical Progression</b> Lead Scaffold Design Engineer L 6.5 Scaffold Manager L 7																		
16.	<b>Other Indian languages in which the Qualification &amp; Model Curriculum are being submitted</b>	English, Hindi																		
17.	<b>Is similar Qualification(s) available on NQR-if yes, justification for this qualification</b>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <b>URLs of similar Qualifications:</b>																		
18.	<b>Is the Job Role Amenable to Persons with Disability</b>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <b>If "Yes," specify applicable type of Disability:</b>																		
19.	<b>How Participation of Women will be Encouraged</b>	Women will be encouraged to join.																		
20.	<b>Are Greening/ Environment Sustainability Aspects Covered</b> ( <i>Specify the NOS/Module which covers it</i> )	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No																		
21.	<b>Is Qualification Suitable to be Offered in Schools/Colleges</b>	<b>Schools</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <b>Colleges</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No																		
22.	<b>Name and Contact Details of Submitting / Awarding Body SPOC</b> ( <i>In case of CS or MS, provide details of both Lead AB &amp; Supporting ABs</i> )	<b>Name:</b> Anand Kumar Singh <b>Email:</b> <a href="mailto:aksingh@ssdfindia.org">aksingh@ssdfindia.org</a> <b>Contact No.:</b> +91-8505955506 <b>Website:</b> <a href="http://www.ssdfindia.org">www.ssdfindia.org</a>																		
23.	<b>Final Approval Date by NSQC:</b> 27-08-2024	<b>24. Validity Duration:</b> 3 Years		<b>25. Next Review Date:</b> 27-08-2027																

## 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 to the curriculum document.

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

S. No	NOS/ Module Name	NOS/ Module Code & Version (if applicable)	Core/ non-core	NCrF/ 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.	Scaffoldings & Specifications.	SSD/N0213 v 1.0	Core	4.5	4	72	38	10	0	120	60	40	-	-	100	17%
2.	Understanding Scaffold Drawings & Designs, Indian & International Standard Codes.	SSD/N0214 v 1.0	Core	6	3	54	26	10	0	90	60	40	-	-	100	13%
3.	Scaffold Design & Drawings using the scaffold & Computer-aided design (CAD) system.	SSD/N0215 v 1.0	Core	6	4	72	18	30	0	120	60	40	20	-	120	17%
4.	Calculation of loads in scaffold designs as per Indian & International Standard.	SSD/N0216 v 1.0	Core	6	3	54	6	30	0	90	60	40	10	-	110	13%
5.	Analysis of scaffold design using STAAD Pro as per applicable IS and International codes.	SSD/N0217 v 1.0	Core	6	5	90	30	30	0	150	60	40	20	-	120	22%
6.	Plan, Organize & Monitor Scaffolding Safety Protocols.	SSD/N0218 v 1.0	Core	4.5	2	36	14	10	0	60	60	40	-	-	100	9%
7.	Employability Skills	DGT/VSQ/N0102	Non-Core	4	2	36	24	-	-	60	30	20	-	-	50	9%
<b>Duration (in Hours) / Total Marks</b>				-	23	414	156	120	0	690	390	260	50	-	700	100%

## Optional NOS/s: No

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.	N/A															
<b>Duration (in Hours) / Total Marks</b>																

## Assessment - Minimum Qualifying Percentage

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

**Minimum Pass Percentage – Aggregate at qualification level: 50%** (Every Trainee should score specified minimum aggregate passing percentage at qualification level to successfully clear the assessment.)

**Minimum Pass Percentage – NOS/Module-wise: 35%** (Every Trainee should score specified minimum passing percentage in each mandatory and selected elective NOS/Module to successfully clear the assessment.)

## Section 3: Training Related

1.	<b>Trainer's Qualification and experience in the relevant sector (in years)</b> (as per NCVET guidelines)	UG/PG in relevant field with 5 years' experience UG in any discipline / Diploma in relevant field with 8 years' experience
2.	<b>Master Trainer's Qualification and experience in the relevant sector (in years)</b> (as per NCVET guidelines)	UG/PG in relevant field with 6 years' experience UG in any discipline / Diploma in relevant field with 9 years' experience
3.	<b>Tools and Equipment Required for Training</b>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (If "Yes," details to be provided in Annexure)
4.	<b>In Case of Revised Qualification, Details of Any Upskilling Required for Trainer</b>	

## Section 4: Assessment Related

1.	<b>Assessor's Qualification and experience in relevant sector (in years)</b> (as per NCVET guidelines)	UG/PG in relevant field with 5 years' experience UG in any discipline / Diploma in relevant field with 8 years' experience
2.	<b>Proctor's Qualification and experience in relevant sector (in years)</b> (as per NCVET guidelines)	UG/PG in relevant with 4 years' experience UG in any discipline / Diploma in relevant field with 7 years' experience

3.	<b>Lead Assessor's/Proctor's Qualification and experience in relevant sector (in years) (as per NCVET guidelines)</b>	UG/PG in relevant field with 6 years' experience UG in any discipline / Diploma in relevant field with 9 years' experience
4.	<b>Assessment Mode (Specify the assessment mode)</b>	Offline / Online
5.	<b>Tools and Equipment Required for Assessment</b>	<input checked="" type="checkbox"/> Same as for training <input checked="" type="checkbox"/> Yes <input type="checkbox"/> 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.	<b>Latest Skill Gap Study (not older than 2 years) (Yes/No):</b> Yes
2.	<b>Latest Market Research Reports or any other source (not older than 2 years) (Yes/No):</b> Yes
3.	<b>Government /Industry initiatives/ requirement (Yes/No):</b> No
4.	<b>Number of Industry validation provided:</b> 30
5.	<b>Estimated nos. of persons to be trained and employed:</b> 15,000
6.	<b>Evidence of Concurrence/Consultation with Line Ministry/State Departments:</b> "No"

### Section 6: Annexure & Supporting Documents Checklist

Specify Annexure Name / Supporting document file name.

1.	<b>Annexure:</b> NCrf/NSQF level justification based on NCrf level/NSQF descriptors (Mandatory)	Yes
2.	<b>Annexure:</b> List of tools and equipment relevant for qualification (Mandatory, except in case of online course)	Yes
3.	<b>Annexure:</b> Detailed Assessment Criteria (Mandatory)	Yes
4.	<b>Annexure:</b> Assessment Strategy (Mandatory)	Yes
5.	<b>Annexure:</b> Blended Learning (Mandatory, in case selected Mode of delivery is "Blended Learning")	No
6.	<b>Annexure:</b> Multiple Entry-Exit Details (Mandatory, in case qualification has multiple Entry-Exit)	Yes
7.	<b>Annexure:</b> Acronym and Glossary (Optional)	Yes

8.	<b>Supporting Document:</b> Model Curriculum ( <i>Mandatory – Public view</i> )	Yes
9.	<b>Supporting Document:</b> Career Progression ( <i>Mandatory - Public view</i> )	Yes
10.	<b>Supporting Document:</b> Occupational Map ( <i>Mandatory</i> )	Yes
11.	<b>Supporting Document:</b> Assessment SOP ( <i>Mandatory</i> )	Yes
12.	<b>Any other document you wish to submit:</b>	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
<b>Professional Theoretical Knowledge/Process</b>	The job holder requires a wide range of specialized theoretical & practical skill, experience, and technical knowledge to perform the task of Scaffold Design in accordance with the applicable standards, drawings, and procedures.	The job holder requires a wide range of specialized theoretical & practical skills & understanding which is not routine.	6
<b>Professional and Technical Skills/ Expertise/ Professional Knowledge</b>	Job holder is required to design scaffolds as per codes & standards, drawings, design, and details etc. The job holder should have particularly good factual & theoretical knowledge of scaffolding works, various steps involved, and the requirement of various elements to ensure safety of users of the scaffold.	The job holder should have particularly good factual & theoretical knowledge & principles in broad context of scaffolding works and various steps involved in inspection such as: <ul style="list-style-type: none"> <li>• Classification of scaffold systems</li> <li>• Types of scaffolds</li> <li>• Indian and basic international standards</li> <li>• Risk assessment and safety measure identification to ensure safe use by users.</li> <li>• Planning and methodology</li> </ul>	6
<b>Employment Readiness &amp; Entrepreneurship Skills &amp; Mind-set/Professional Skill</b>	The job holder is expected to have cognitive & practical skills to design the scaffold with software and generate solutions to specific problems related to scaffolding and ability to ensure safety of the scaffold before it is used.	The outcomes expected from the job holder require cognitive & practical skills for designing of the scaffold, suggesting solutions to specific problems. It also needs to exhibit proactive cooperation and collaboration with scaffold erection teams.	6

		<ul style="list-style-type: none"> <li>● Effective communication, initiative, flexibility, and an ability to induce collaboration.</li> <li>● Exhibits integrity, interpersonal understanding, and self-confidence.</li> <li>● Utilizes a systematic approach to apply knowledge in initiative-taking guidance and problem solving.</li> <li>● Facilitate quality of work through timely communication and guidance.</li> </ul> <p>Suggest practical solutions to problems</p>	
<p><b>Broad Learning Outcomes/Core Skill</b></p>	<p>The job holder is expected to calculate the loads and other details. He is also expected to have core skills in demonstrating teamwork, time management, effective guidance, and communication to ensure compliance to set standards and procedures.</p>	<p>The job holder will require mathematical calculations to arrive at the loads allowed and design checks. He is also expected to have demonstrate;-</p> <ul style="list-style-type: none"> <li>● Teamwork</li> <li>● Time management</li> <li>● Effective guidance and communication</li> <li>● Ensure compliance with standards.</li> <li>● Ensure process compliance.</li> </ul> <p>Constructive feedback for improvement to all stakeholders.</p>	<p>6</p>
<p><b>Responsibility</b></p>	<p>The Job holder conducts design of scaffold and is solely responsible to ensure compliance of all applicable standards and procedures of scaffold inspection and the subordinates collaborating with him. He is also responsible for the subordinates under him and following activities:-</p> <ul style="list-style-type: none"> <li>● Design record preparation &amp; submission.</li> <li>● Timely feedback and guidance.</li> </ul>	<p>The Job holder is solely responsible for his work in conducting safe design and ensuring standard compliances and responsible for his work &amp; learning. He needs to have adequate knowledge of the standards, safety measures and the codes &amp; standards.</p>	<p>6</p>

	Responsibility for continual learning and development of self	
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### 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
•	Podger spanner	Nos	1
•	Ring spanner	Nos	1
•	Open-End Spanner	Nos	1
•	Claw hammer	Nos	1
•	Mash hammer	Nos	1
•	Vernier caliper	Nos	1
•	Hack saw blade with frame	Nos	1
•	Line string	Nos	1
•	Knife	Nos	1
•	Wheel pulley	Nos	1
•	Drilling machine	Nos	1
•	Adjustable screw jack base plate	Nos	1
•	Spigot with bolts and nuts	Nos/set	1
•	H-frame Scaffold	Nos	1
•	Cup Lock System Scaffold (vertical, ledger, transom)	Nos/set	1
•	Ring Lock system Scaffold	Nos/set	1

•	Cross bracings	Nos	1
•	Extension pipes	Nos	1
•	Sole boards	Nos	1
•	GI Pipe 48.3 mm OD, 4mm thick	Nos	1
•	Swivel coupler	Nos	1
•	Right angle coupler	Nos	1
•	Putlog coupler	Nos	1
•	Sleeve coupler	Nos	1
•	Stairway set (including all components)	Nos	1
•	Ladder 6.0 mt	Nos	1
•	Ladder 3.0 mt	Nos	1
•	Ladder clamps(Suitable to ladder)	Nos	1
•	Toe guard	Nos	1
•	Wooden planks	Nos	1
•	Staircase tower scaffold with components (as per manufacturer)	Nos	1
•	Mobile tower scaffold with components (as per manufacturer)	Nos	1
•	Safety Net	Nos	1
•	Steel scale	Nos	1
•	Try square	Nos	1
•	Spirit level	Nos	1

•	Plumb bob	Nos	1
•	Measuring tape	Nos	1
•	Safety Helmet	Nos	1
•	Safety goggles	Nos	1
•	Safety shoes	Nos	1
•	Safety belt	Nos	1
•	Safety Harness	Nos	1
•	Cotton Hand - Gloves	Nos	1
•	Barricading tape	Nos/Roll	1

#### Classroom Aids

The aids required to conduct sessions in the classroom are:

1. Blackboard / White board
2. Marker
3. Projector
4. Laptop with relevant software
5. Working Models
6. Open yard for practical's

**Annexure: Industry Validations Summary**

Provide summary information of all the industry validations in the 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	Irrigation Department Government of UP	Er. Manoj Kumar Arya	Junior Engineer	Aligarh, Uttar Pradesh	9412818118	-	-
2	Shaheed Bhagat Singh College, University of Delhi	Dr. Chandrakanta	Former Faculty	Delhi University, New Delhi	-	<a href="mailto:chandrakantajnu@gmail.com">chandrakantajnu@gmail.com</a>	-
3	Surya Contractors	Mr. Rajendra Kumar	Billing Engineer (Civil)	Amritsar, Punjab	8802661569	-	-
4	Accurate Institute of Management and Technology	Dr. S L Rajput	Associate Professor	Greater Noida, Uttar Pradesh	807626549	-	-
5	Pratham education foundation	Mr. Ashutosh Sharma Mr. Raman Singh	Program Associate (Civil)	Noida, Uttar Pradesh	7982315949 7827582148	-	-

6	CPWD, New Delhi	Mr. Bharat Singh Chauhan	Junior Engineer (Civil)	O/A Assistant Engineer, 4/N, CPWD Shahjahan road, New Delhi	-	-	-
7	UPPCL, Lucknow	Ms. Sandhya Mishra	Junior Engineer (Civil)	UPPCL, Left Bank Gomti Barrage, Gomti Nagar, Lucknow, UP	-	-	-
8	Deepam Contractors Pvt. Ltd.	Mr. R. B. Singh	Director	H-156 Beta 2, Greater Noida, UP-203010	7503920973	<a href="mailto:deepamcontractor@gmail.com">deepamcontractor@gmail.com</a>	-
9	IIT Guwahati	Dr. Sparsh Johari	Assistant Professor	Indian Institute of Technology, Guwahati	7827060976	<a href="mailto:sparshjohri@iitg.ac.in">sparshjohri@iitg.ac.in</a>	-
10	Ciria India Limited	Mr. Akash Nirvan	Head EHSS	C-116, 2 <sup>ND</sup> & 3 <sup>RD</sup> Floor, Sector-2, Noida-201301, UP	8800377994	<a href="mailto:Akash.nirvan@morganplc.com">Akash.nirvan@morganplc.com</a>	-
11	IIT Roorkee	Mr. Amarjeet	Research Scholar (Dept. of Civil Engg)	Indian Institute of Technology Roorkee, Uttarakhand	7839116059	-	-

12	N.R., Indian Railways	Bishun Dayal Verma	SSE	Carriage workshop, Alam Bagh, Lucknow- Uttar Pradesh	8707481190 9794830451	-	-
13	Larsen & Toubro Limited	Mr. Rahul Sinha	Assistant Construction Manager	NCRTC RRTS Project, Meerut, Uttar Pradesh	-	<a href="mailto:Rahul.sinhal@intecc.com">Rahul.sinhal@intecc.com</a>	-
14	Ask EHS engineering & consultants Pvt ltd	Mahesh S Lanjekar	Business Head	Surat, Gujarat	9227695202	<a href="mailto:Mahesh.lanjekar@askehspmc.com">Mahesh.lanjekar@askehspmc.com</a>	-
15	Symplico	Ms. Lata Rawat	Manager	Surat, Gujarat	9484825000	-	-
16	Pooja Enterprises	Mr. Karan Aggarwal	General Manager	Surat, Gujarat	9725348874	-	-
17	Structural Specialties & Projects Pvt Ltd	Mr. Sawant	-	801, Odyssey, Road No. 9, Wagle Estate, Thane (West), Thane, Maharashtra 400604	022 2580 1080	-	-
18	Jobby Industrial Services Pvt Ltd	Mr. B Naik	-	UNIT NO. 25 & 26, NAHUR UDYOG CO-OP SOCIETY LTD. PANDIT M. M. MALVIYA	02221675100	-	-

				MARG, MULUND (W), MUMBAI City MH 400080 IN			
19	Enercore Power Builders	Mr. Paramasiram	S -	351 / 270, 1st Floor, MKN Road, Alandur, Chennai, Tamil Nadu 600016	(949) 732-4400	-	-
20	Munn Engineers & Developers Pvt Ltd	-	-	Ward No. 3, House No: 26, Nadikhandisa hi, Phulbani, IGndhamal, Odisha-762001	-	-	-
21	Micron Electricals	Syed Akbar Ahmed Zaidi  Mr. Mohan Rangala	Safety Head  EHS Engineer	No.86/E-1,2nd Cross,3rd Main Road, Industrial Suburb,2nd Stage. Yeshwanthpur , Bengaluru – 560 022	9885092841  9515470663	<a href="mailto:qhseakbar@gmail.com">qhseakbar@gmail.com</a> <a href="mailto:rangalamohanrao@gmail.com">rangalamohanrao@gmail.com</a>	-
22	Tata Project	SK Mohammad Ali Akbar	Safety Officer	Mumbai, Maharashtra, India	9040597712	-	-

23	Reliance Industries Limited	Ravi Ballabh	GM, S&OR-Const. Safety		9725007688	<a href="mailto:Ravi.ballabh@ril.com">Ravi.ballabh@ril.com</a>	-
24	Signify Innovation India Limited	Pradeep Singh Parhar	Manager Health & Safety	9 <sup>th</sup> floor, Building 9B, DLF cyber city, Gurugram-Haryana	9814721820	<a href="mailto:Pradeep.parhar@signify.com">Pradeep.parhar@signify.com</a>	-
25	ASK EHS	Harshit Parikh	Business Development Overseas (HSE Recruitment & Projects)	Surat, Gujarat	6359922897	<a href="mailto:harshitparikh@askehsPMC.com">harshitparikh@askehsPMC.com</a>	-
26	JSW	Veerendra Kumar	Safety Consultant		-	<a href="mailto:Veerendra.kumar@jsw.in">Veerendra.kumar@jsw.in</a>	-
27	Carrier India Limited	Md. Mukaram	Safety Head		-	<a href="mailto:md.mukaram@carrier.com">md.mukaram@carrier.com</a>	-
28	Kalpataru Group	Lalit Tiwari	President- EHS & Group chief sustainability officer		-	<a href="mailto:lalitkumar.tiwari@kalpataru.com">lalitkumar.tiwari@kalpataru.com</a>	-
29	United Fire & Safety Services	Sandeep Mehta	Owner	GIDC, Industrial estate, makarpura, Vadodara-390010	6358827798	<a href="mailto:Usafe.fire@gmail.com">Usafe.fire@gmail.com</a>	-
30	L&T Limited	Manish Gupta	HSE Head	L&T Energy-Hydrocarbon (HSE), Hazira	-	-	-

## 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	200	200	50	50	-	-
2025	500	500	100	100	-	-
2026	500	500	200	200	-	-

*Data to be provided year-wise for the 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
N/A													

*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:** This is a new qualification.

**Content availability for previous versions of qualifications:** This is a new qualification.

Participant Handbook  Facilitator Guide  Digital Content  Qualification Handbook  Any Other:

**Languages in which Content is available:** Hindi and English

## 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
SSD/N0213 v 1.0 : Scaffoldings & Specifications	PC-1 Identify various types of scaffolds, their components.	9	6	-	-
	PC-2 Determine type of scaffold required as per site & load requirements.	6	4	-	-
	PC-3 Identify working & faulty components and defects in the components.	6	4	-	-
	PC-4 Calculate load on scaffold & optimum load.	6	4	-	-

	PC-5 Calculate design load for the scaffold.	6	4	-	-
	PC-6 Analyze Working requirements of components, tie-offs, supports etc. of the scaffoldings as per design requirement.	9	6	-	-
	PC-7 Identify types of fall protection for the scaffolds, tie-offs, supports and ladders.	9	6	-	-
	PC-8 Work out fall protections required in the scaffold for various activities and effectiveness.	9	6	-	-
	<b>Total Marks</b>	<b>60</b>	<b>40</b>		
<b>SSD/N0214 v 1.0 : Understanding Scaffold Drawings &amp; Designs, Indian &amp; International Standard Codes</b>	PC-1 Interpret scaffold drawings & safety elements.	9	6	-	-
	PC-2 Interpret scaffold drawings & designs.	6	4	-	-
	PC-3 Interpret details of scaffold drawings.	6	4	-	-
	PC-4 Work out design & safety parameters of scaffolds as per Indian Standards IS-2750 & IS-3696.	9	6	-	-
	PC-5 Work out design details of scaffold as per International Standards of OSHA & BS standards & safety parameters.	6	4	-	-
	PC-6 Check design details of scaffolds and its interpretations	6	4	-	-
	PC-7 Identify fall protections & design for fall protection.	6	4	-	-
	PC-8 Work out details of ladder/temporary ladder requirements & design.	6	4	-	-
	PC-9 Analyze factors affecting designing of scaffold.	6	4	-	-
	<b>Total Marks</b>	<b>60</b>	<b>40</b>	-	-
<b>SSD/N0215 v 1.0 : Scaffold Design &amp; Drawings using the scaffold &amp; Computer-Aided Design (CAD) system</b>	PC1. Carry out necessary calculations to compute dimensions of various components/ parts of drawings.	6	4	20	-
	PC2. Convert the dimensions to the required scale to input in the system.	6	4		-
	PC3. Use drafting principles to produce cad drawings showing plans, sections, elevations, and different types of views.	6	4		-
	PC4. Use appropriate commands in the software to draw the required drawings as per standard practices.	6	4		-
	PC5. Use keyboard commands and pull-down menus available in common CAD systems to prepare the drawings.	6	4		-

	PC6. Use codes and other references that follow the required conventions.	6	4	20	-
	PC7. Draw structures to highlight critical features in accordance with specifications and requirements.	6	4		-
	PC8. Draw scaffold assemblies to highlight critical features as per specification.	6	4		-
	PC9. Create tables to denote the name, dimensions, perimeter, and area of various parts or components as per client requirement.	6	4		-
	PC10. Use relevant and appropriate symbols as per drawing requirements to provide details in the drawings.	6	4		-
	<b>NOS Total Marks</b>	<b>60</b>	<b>40</b>		<b>20</b>
<b>SSD/N0216 v 1.0 : Calculation of loads in scaffold designs as per Indian &amp; International Standard</b>	PC-1 Identify loads & load factors affecting scaffold design.	6	4	10	-
	PC-2 Comprehend design load calculation on scaffold.	6	4		-
	PC-3 Analyzes dead loads, imposed loads and wind loads on scaffolds.	6	4		-
	PC-4 Analyze load IS-875 and its element applicable for scaffolds.	6	4		-
	PC-5 Analyze provisions of IS-3696.	6	4		-
	PC-6 Apply IS-875 & IS-3696 in load calculation and international codes & practices..	6	4		-
	PC- 7 Calculate dead load details of scaffold as per Indian Standard code for scaffold.	6	4		-
	PC-8 Calculate imposed loads & wind loads as per Indian & International standard codes for scaffolds.	6	4		-
	PC-9 Calculates combination of loads on scaffold.	6	4		-
	PC-10 Check design load details of the scaffold as per international design standards.	6	4		-
	<b>NOS Total Marks</b>	<b>60</b>	<b>40</b>		<b>10</b>

<b>SSD/N0217 v 1.0 : Analysis of Scaffold design using STAAD Pro as per applicable IS and international codes</b>	PC1. Draw structures to coordinates, nodes, dimensions and specification.	6	4	20	-
	PC2. Draw scaffold assemblies to highlight critical features as per specification.	6	4		-
	PC-3 Apply loads on scaffold as per calculations.	6	4		-
	PC-4. Carry out the scaffold design in software for complete analysis.	6	4		-
	PC-5 Determine the required scaffold components and their placement based on design calculations and load requirements.	6	4		-
	PC-6 Ensure compliance with relevant codes and standards throughout the design and analysis process.	6	4		-
	PC-7 Read and understand the analyzed results and understand the outcome.	5	3		-
	PC-8 Extract the required result and prepare the checklist for each component.	4	2		-
	PC-9 Check critical nodes and each of the inspection points of the scaffold.	3	3		-
	PC-10 Prepare & extract the software drawing after analysis.	5	3		-
	PC-11 Prepare and extract result data after analysis for checking & records.	4	2		-
	PC-12 Prepare the data sheet and drawing sheet extracted from the software after analysis for records..	3	3		-
<b>NOS Total Marks</b>	<b>60</b>	<b>40</b>	<b>20</b>	-	
<b>SSD/N0218 v 1.0: Plan, Organize &amp; Monitor Scaffolding Safety Protocols</b>	PC-1 Plan the resources, schedules and timelines as per work timelines given by superiors.	12	8	-	-
	PC-2 Understand hierarchy of the organization and communicate to concerned co-workers & superiors.	6	4	-	-
	PC-3 Task the subordinates as per task & timelines.	6	4	-	-
	PC-4 Organize resource collection and provisioning.	6	4	-	-

	PC-5 Communicate & Organize effective communication to concerned co-workers & superiors.	6	4	-	-
	PC-6 Brief the subordinates about the schedule, sequence, timing & resources.	6	4	-	-
	PC-7 Monitor progress of work, management of resources, guidance to subordinates and monitoring tools.	6	4	-	-
	PC-8 Learn reporting procedure & tools, report preparation to superiors and keeping the other teams informed.	6	4	-	-
	PC-9 Analyze Documentations methods, record maintenance, report submission & compliances	6	4	-	-
	<b>NOS Total Marks</b>	<b>60</b>	<b>40</b>	-	-
<b>DGT/VSQ/N0102: Employability Skills</b>	PC- 1 Identify employability skills required for jobs in various industries.	0.5	0.5	-	-
	PC- 2 Identify and explore learning and employability portals.	0.5	0.5	-	-
	PC- 3 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.	0.5	0.5	-	-
	PC- 4 Follow environmentally sustainable practices.	0.5	0.5	-	-
	PC- 5 Recognize the significance of 21st Century Skills for employment.	3	-	-	-
	PC- 6 Practice the 21st Century Skills such as Self-Awareness, Behavior 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.	2	1	-	-
	PC- 7 Use basic English for everyday conversation in different contexts, in person and over the telephone.	1	1	-	-
	PC- 8 Read and understand routine information, notes, instructions, mails, letters etc. written in English.	1	1	-	-
	PC- 9 Write short messages, notes, letters, e-mails etc. in English.	1	1	-	-
	PC- 10 Understand the difference between job and career.	1	-	-	-
	PC- 11 Prepare a career development plan with short- and long-term goals, based on aptitude.	1	1	-	-

PC- 12 Follow verbal and non-verbal communication etiquette and active listening techniques in various settings.	2	-	-	-
PC- 13 Work collaboratively with others in a team.	1	1	-	-
PC- 14 Communicate and behave appropriately with all genders and PwD.	0.5	0.5	-	-
PC- 15 Escalate any issues related to sexual harassment at workplace according to POSH Act.	0.5	0.5	-	-
PC- 16 Select financial institutions, products, and services as per requirement.	0.5	0.5	-	-
PC- 17 Carry out offline and online financial transactions, safely and securely.	1	1	-	-
PC- 18 Identify common components of salary and compute income, expenses, taxes, investments etc.	0.5	0.5	-	-
PC- 19 Identify relevant rights and laws and use legal aids to fight against legal exploitation.	0.5	0.5	-	-
PC- 20 Operate digital devices and carry out basic internet operations securely and safely.	1	1	-	-
PC- 21 Use e- mail and social media platforms and virtual collaboration tools to work effectively.	2	2	-	-
PC- 22 Use basic features of word processor, spreadsheets, and presentations.	1	1	-	-
PC- 23 Identify diverse types of Entrepreneurship and Enterprises and assess opportunities for potential business through research.	2	-	-	-
PC- 24 Develop a business plan and a work model, considering the 4Ps of Marketing Product, Price, Place and Promotion.	1	1	-	-
PC- 25 Identify sources of funding, anticipate, and mitigate any financial/ legal hurdles for the potential business opportunity.	1	1	-	-
PC- 26 Identify diverse types of customers	0.5	0.5	-	-
PC- 27 Identify and respond to customer requests and needs in a professional manner.	0.5	0.5	-	-
PC- 28 Follow appropriate hygiene and grooming standards.		0.5	-	-
PC- 29 Create a professional Curriculum vitae (Résumé).	0.5	-	-	-
PC- 30 Search for suitable jobs using reliable offline and online sources such as Employment exchange, recruitment agencies, newspapers etc. and job portals, respectively.	0.5	0.5	-	-
PC- 31 Apply to identified job openings using offline /online methods as per requirement.	0.5	0.5	-	-

	PC- 32 Answer questions politely, with clarity and confidence, during recruitment and selection.	0.5	-	-	-
	PC- 33 Identify apprenticeship opportunities and register for it as per guidelines and requirement.	0.5		-	-
	<b>Total Marks</b>	<b>30</b>	<b>20</b>	-	-
	<b>Grand Total: 700</b>	<b>390</b>	<b>260</b>	<b>50</b>	

#### 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.

*Mention the detailed assessment strategy in the provided template.*

##### <1. Assessment System Overview:

- Batches are assigned to the assessment agencies for conducting the assessment on SIP/Portal or email.
- Assessment agencies send the assessment confirmation to VTP/TC looping Awarding Body(AB)
- Assessment agency deploys the ToA certified Assessor for executing the assessment.
- AB ensures the assessment process & records.

##### 2. Testing Environment:

- Check the assessment location, date, and time.
- 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 AA/Subject Matter Experts (SME) and verified by the other SME.
- Questions are mapped to the specified assessment criteria.
- Assessor will be ToA certified & trainer will be ToT Certified

##### 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

##### 5. Method of verification or validation:

- Surprise visit to the assessment location.
- Method for assessment documentation, archiving, and access
- Soft/Hard copies of the documents are stored.

##### On the Job:

1. The candidate works for all modules.
2. The candidate must score 50% in assessment to successfully complete the OJT.

3. Tools of Assessment that will be used for assessing whether the candidate is having desired skills, understanding needs & requirements.
  - Report prepared by trainees during OJT.
4. Assessment of task ensure that the candidate can perform all tasks of the job role required:

### 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
<b>National Occupational Standards (NOS)</b>	NOS defines 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 do.
<b>Qualification</b>	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
<b>Qualification File</b>	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.
<b>Sector</b>	A grouping of professional activities based on their main economic function, product, service, or technology.
<b>Long Term Training</b>	Long-term skilling means any vocational training program undertaken for a year or above. <a href="https://ncvet.gov.in/sites/default/files/NCVET.pdf">https://ncvet.gov.in/sites/default/files/NCVET.pdf</a>