



QUALIFICATION FILE

Bar Bender and Steel Fixer

☒ Short Term Training (STT) ☐ Long Term Training (LTT) ☐ Apprenticeship

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

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

NCrF/NSQF Level: 4

Submitted By:

Construction Skill Development Council of India

Address: CPB - 201 & 202, Block-4B, DLF Corporate Park, Phase - III, MG Road, Near Guru Dronacharya Metro Station, Gurugram, Haryana - 122002

Submitting Body Contact Details:

Name: Abhisek Prasad Mishra

Position in the Organization: Deputy Manager - Standards & Research

Address: Same as above

Tel number(s): 0124-4513915-18 Ext-23

E-mail address: abhisek@csdcindia.org

Table of Contents

Section 1: Basic Details	3
Section 2: Module Summary	6
NOS/s of Qualifications	6
Mandatory NOS/s:.....	6
Elective NOS/s:	7
Optional NOS/s:.....	8
Assessment - Minimum Qualifying Percentage	8
Section 3: Training Related	9
Section 4: Assessment Related	11
Section 5: Evidence of the need for the Qualification	12
Section 6: Annexure & Supporting Documents Checklist	12
Annexure: Evidence of Level	13
Annexure: Tools and Equipment (Lab Set-Up)	17
Annexure: Industry Validations Summary	20
Annexure: Training & Employment Details	24
Annexure: Blended Learning	26
Annexure: Detailed Assessment Criteria	27
Annexure: Assessment Strategy	38
Annexure: Acronym and Glossary	41
Annexure: Career Progression	43

Section 1: Basic Details

1.	Qualification Name	Bar Bender and Steel Fixer																				
2.	Sector/s	Construction																				
3.	Type of Qualification: ☐ New ☒ Revised ☐ Has Electives/Options ☐ OEM	NQR Code & version of existing/previous qualification: (QG-3.5-CO-03373-2024-V1.1-CSDCI, v4.0)		Qualification Name of existing/previous version: Bar Bender and Steel Fixer																		
4.	a. OEM Name b. Qualification Name <i>(Wherever applicable)</i>	NA																				
5.	National Qualification Register (NQR) Code &Version <i>(Will be issued after NSQC approval)</i>	QG-04-CO-03948-2025-V2-CSDCI & v 5.0		6. NCrF/NSQF Level: 4																		
7.	Award (Certificate/Diploma/Advanced Diploma/ Any Other) <i>(Wherever applicable specify multiple entry/exits also & provide details in annexure)</i>	Certificate																				
8.	Brief Description of the Qualification	A Bar Bender and Steel Fixer is responsible for marking, cutting, bending, fabricating, placing and fixing reinforcement bars at the desired location using appropriate hand or power tools, within the specified time and defined tolerance limits, following safe work practices.																				
9.	Eligibility Criteria for Entry for Student/Trainee/Learner/Employee	a. Entry Qualification & Relevant Experience: <table border="1"> <thead> <tr> <th>S. No.</th> <th>Academic/Skill Qualification (with Specialization - if applicable)</th> <th>Required Experience (with Specialization - if applicable)</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td>12th grade pass</td> <td></td> </tr> <tr> <td>2.</td> <td>Completed 2nd year of 3-year diploma after 10th (in Civil Engineering)</td> <td></td> </tr> <tr> <td>3.</td> <td>11th grade pass</td> <td>1-year relevant experience</td> </tr> <tr> <td>4.</td> <td>10th grade pass</td> <td>2-year relevant experience</td> </tr> <tr> <td>5.</td> <td>8th grade pass</td> <td>4-year relevant experience</td> </tr> </tbody> </table>			S. No.	Academic/Skill Qualification (with Specialization - if applicable)	Required Experience (with Specialization - if applicable)	1.	12th grade pass		2.	Completed 2nd year of 3-year diploma after 10 th (in Civil Engineering)		3.	11th grade pass	1-year relevant experience	4.	10 th grade pass	2-year relevant experience	5.	8th grade pass	4-year relevant experience
S. No.	Academic/Skill Qualification (with Specialization - if applicable)	Required Experience (with Specialization - if applicable)																				
1.	12th grade pass																					
2.	Completed 2nd year of 3-year diploma after 10 th (in Civil Engineering)																					
3.	11th grade pass	1-year relevant experience																				
4.	10 th grade pass	2-year relevant experience																				
5.	8th grade pass	4-year relevant experience																				

		6.	Previous relevant qualification of NSQF Level 3 (Assistant Bar Bender and Steel Fixer)	3-year relevant experience			
		b. Minimum Job Entry Age: 18 Years					
10.	Credits Assigned to this Qualification, Subject to Assessment (as per National Credit Framework (NCrF))	15		11. Common Cost Norm Category (I/II/III) (wherever applicable): I			
12.	Any Licensing requirements for Undertaking Training on This Qualification (wherever applicable)	NA					
13.	Training Duration by Modes of Training Delivery (Specify Total Duration as per selected training delivery modes and as per requirement of the qualification)	☒ Offline ☐ Online ☐ Blended					
		Training Delivery Modes	Theory (Hours)	Practical (Hours)	OJT Mandatory (Hours)	OJT Recommended (Hours)	Total (Hours)
		Classroom (offline)	150	270	30		450
		Online					
(Refer Blended Learning Annexure for details)							
14.	Aligned to NCO/ISCO Code/s (if no code is available mention the same)	NCO-2015/7214.1101					
15.	Progression path after attaining the qualification (Please show Professional and Academic progression)	Foreman Reinforcement					
16.	Other Indian languages in which the Qualification & Model Curriculum are being submitted	Hindi					
17.	Is similar Qualification(s) available on NQR-if yes, justification for this qualification	☐ Yes ☒ No URLs of similar Qualifications:					
18.	Is the Job Role Amenable to Persons with Disability	☐ Yes ☒ No If "Yes", specify applicable type of Disability:					

19.	How Participation of Women will be Encouraged	To encourage women to participate in bar bending and fixing job roles, it is important to provide education, mentorship, and networking opportunities, as well as training and development programs. Flexible work arrangements and promoting successful women in bar bending and fixing can also inspire and encourage women to pursue careers in this field. Creating a culture of inclusion and diversity can help women feel welcome and valued in bar bending and fixing job roles, through policies and practices that support work-life balance, equal pay and promotion opportunities, and a safe and respectful workplace.	
20.	Are Greening/ Environment Sustainability Aspects Covered <i>(Specify the NOS/Module which covers it)</i>	☒ Yes ☐ No CON/N9001	
21.	Is Qualification Suitable to be Offered in Schools/Colleges	Schools ☒ Yes ☐ No Colleges ☒ Yes ☐ No	
22.	Name and Contact Details of Submitting / Awarding Body SPOC <i>(In case of CS or MS, provide details of both Lead AB & Supporting ABs)</i>	Name: Abhisek Prasad Mishra Email: abhisek@csdcindia.org Contact No.: 0124-4513915-18 Ext-23 Website: www.csdcindia.org	
23.	Final Approval Date by NSQC: 08-05-2025	24. Validity Duration: 3 Years	25. Next Review Date: 30-04-2028

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 Training **Man.**-Mandatory **Rec.**-Recommended **Proj.**-Project

S. No	NOS/Module Name	NOS/Module Code & Version (if applicable)	Core/Non-Core	NCrF/NS QF 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.	Read and understand routine drawings / sketches and Bar Bending Schedule (BBS)	CON/N0204 & v 5.0	Core	4	2	20	30	10	-	60	30	70	-	-	100	20
2.	Use hand and power tools for cutting and bending of reinforcement bars	CON/N0205 & v 5.0	Core	4	3	15	65	10	-	90	30	70	-	-	100	20
3.	Prepare, fabricate, place and fix reinforcement bars for RCC structures	CON/N0206 & v 5.0	Core	4	6	70	100	10	-	180	30	70	-	-	100	20
4.	Work according to personal health, safety and environment protocols at construction site	CON/N9001 & v 3.0	Core	4	1	05	25	-	-	30	30	70	-	-	100	10

S. No	NOS/Module Name	NOS/Module Code & Version (if applicable)	Core/ Non-Core	NCrF/NS QF 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)
5.	Work effectively in a team to deliver desired results at the workplace	CON/N8001 & v 3.0	Non-Core	4	1	05	25	-	-	30	30	70	-	-	100	10
6.	Plan and organize work to meet expected outcomes	CON/N8002 & v 4.0	Non-Core	4	1	05	25	-	-	30	30	70	-	-	100	10
7.	Employability Skills (30 Hours)	DGT/VSQ/N0101 & v 1.0	Non-Core	2	1	30	-	-	-	30	20	30	-	-	50	10
Duration (in Hours) / Total Marks					14	150	270	30	-	420	200	450	-	-	650	100

Elective NOS/s:

S. No	NOS/Module Name	NOS/Module Code & Version (if applicable)	Core/ Non-Core	NCrF/NS QF 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.	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2.	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Duration (in Hours) / Total Marks					NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Optional NOS/s:

S. No	NOS/Module Name	NOS/Module Code & Version (if applicable)	Core/ Non-Core	NCrF/NS QF 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.	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2.	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Duration (in Hours) / Total Marks					NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Assessment - Minimum Qualifying Percentage

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

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

Minimum Pass Percentage – NOS/Module-wise: ____% (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.	Trainer's Qualification and experience in the relevant sector (in years) (as per NCVET guidelines)						
		Minimum Educational Qualification	Specialization	Relevant Industry Experience		Preferable Training Experience	
				Years	Specialization	Years	Specialization
		B.E. / B.Tech	Civil / Mechanical Engineering	2	Site Execution (Civil Work)	1	Bar Bending and Steel Fixing
		OR					
		Diploma	Civil Engineering	3	Site Execution (Civil Work)	1	Bar Bending and Steel Fixing
		OR					
		ITI	Relevant Trade	6	Site Execution (Civil Work)	1	Bar Bending and Steel Fixing
		OR					
		Graduation	in any Stream	6	Site Execution (Civil Work)	1	Bar Bending and Steel Fixing
		OR					
		Ex-Army Graduate	in any Stream	6	Site Execution (Civil Work)	1	Bar Bending and Steel Fixing

2.	Master Trainer's Qualification and experience in the relevant sector (in years) (as per NCVET guidelines)	<table border="1"> <thead> <tr> <th data-bbox="743 277 1035 412" rowspan="2">Minimum Educational Qualification</th> <th data-bbox="1035 277 1278 412" rowspan="2">Specialization</th> <th colspan="2" data-bbox="1278 277 1373 412">Relevant Industry Experience</th> <th colspan="2" data-bbox="1373 277 1604 412">Preferable Training Experience</th> </tr> <tr> <th data-bbox="1278 347 1373 412">Years</th> <th data-bbox="1373 347 1604 412">Specialization</th> <th data-bbox="1604 347 1701 412">Years</th> <th data-bbox="1701 347 1940 412">Specialization</th> </tr> </thead> <tbody> <tr> <td data-bbox="743 412 1035 488">B.E. / B.Tech</td> <td data-bbox="1035 412 1278 488">Civil / Mechanical Engineering</td> <td data-bbox="1278 412 1373 488">6</td> <td data-bbox="1373 412 1604 488">Site Execution (Civil Work)</td> <td data-bbox="1604 412 1701 488">1</td> <td data-bbox="1701 412 1940 488">Bar Bending and Steel Fixing</td> </tr> <tr> <td colspan="6" data-bbox="743 488 1940 526">OR</td> </tr> <tr> <td data-bbox="743 526 1035 602">Diploma</td> <td data-bbox="1035 526 1278 602">Civil Engineering</td> <td data-bbox="1278 526 1373 602">8</td> <td data-bbox="1373 526 1604 602">Site Execution (Civil Work)</td> <td data-bbox="1604 526 1701 602">1</td> <td data-bbox="1701 526 1940 602">Bar Bending and Steel Fixing</td> </tr> <tr> <td colspan="6" data-bbox="743 602 1940 639">OR</td> </tr> <tr> <td data-bbox="743 639 1035 716">ITI</td> <td data-bbox="1035 639 1278 716">Relevant Trade</td> <td data-bbox="1278 639 1373 716">10</td> <td data-bbox="1373 639 1604 716">Site Execution (Civil Work)</td> <td data-bbox="1604 639 1701 716">1</td> <td data-bbox="1701 639 1940 716">Bar Bending and Steel Fixing</td> </tr> <tr> <td colspan="6" data-bbox="743 716 1940 753">OR</td> </tr> <tr> <td data-bbox="743 753 1035 862">Existing TOT certified Trainer in Skill Qualification</td> <td data-bbox="1035 753 1278 862">Bar Bender and Steel Fixer</td> <td data-bbox="1278 753 1373 862">2</td> <td data-bbox="1373 753 1604 862">Site Execution (Civil Work)</td> <td data-bbox="1604 753 1701 862">5</td> <td data-bbox="1701 753 1940 862">Bar Bending and Steel Fixing</td> </tr> </tbody> </table>	Minimum Educational Qualification	Specialization	Relevant Industry Experience		Preferable Training Experience		Years	Specialization	Years	Specialization	B.E. / B.Tech	Civil / Mechanical Engineering	6	Site Execution (Civil Work)	1	Bar Bending and Steel Fixing	OR						Diploma	Civil Engineering	8	Site Execution (Civil Work)	1	Bar Bending and Steel Fixing	OR						ITI	Relevant Trade	10	Site Execution (Civil Work)	1	Bar Bending and Steel Fixing	OR						Existing TOT certified Trainer in Skill Qualification	Bar Bender and Steel Fixer	2	Site Execution (Civil Work)	5	Bar Bending and Steel Fixing
Minimum Educational Qualification	Specialization	Relevant Industry Experience			Preferable Training Experience																																																	
		Years	Specialization	Years	Specialization																																																	
B.E. / B.Tech	Civil / Mechanical Engineering	6	Site Execution (Civil Work)	1	Bar Bending and Steel Fixing																																																	
OR																																																						
Diploma	Civil Engineering	8	Site Execution (Civil Work)	1	Bar Bending and Steel Fixing																																																	
OR																																																						
ITI	Relevant Trade	10	Site Execution (Civil Work)	1	Bar Bending and Steel Fixing																																																	
OR																																																						
Existing TOT certified Trainer in Skill Qualification	Bar Bender and Steel Fixer	2	Site Execution (Civil Work)	5	Bar Bending and Steel Fixing																																																	
3.	Tools and Equipment Required for Training	☒ Yes ☐ No (If "Yes", details to be provided in Annexure)																																																				
4.	In Case of Revised Qualification, Details of Any Upskilling Required for Trainer	Not Applicable																																																				

Section 4: Assessment Related

1.	Assessor's Qualification and experience in relevant sector (in years) (as per NCVET guidelines)	<table border="1"> <tr> <th data-bbox="747 315 1062 418" rowspan="2">Minimum Educational Qualification</th> <th data-bbox="1062 315 1472 418" rowspan="2">Specialization</th> <th colspan="2" data-bbox="1472 315 1942 363">Relevant Industry Experience</th> </tr> <tr> <th data-bbox="1472 363 1577 418">Years</th> <th data-bbox="1577 363 1942 418">Specialization</th> </tr> <tr> <td data-bbox="747 418 1062 467">B.E. / B.Tech</td> <td data-bbox="1062 418 1472 467">Civil / Mechanical Engineering</td> <td data-bbox="1472 418 1577 467">2</td> <td data-bbox="1577 418 1942 467">Site Execution (Civil Work)</td> </tr> <tr> <td colspan="4" data-bbox="747 467 1942 500">OR</td> </tr> <tr> <td data-bbox="747 500 1062 548">Diploma</td> <td data-bbox="1062 500 1472 548">Civil Engineering</td> <td data-bbox="1472 500 1577 548">5</td> <td data-bbox="1577 500 1942 548">Site Execution (Civil Work)</td> </tr> <tr> <td colspan="4" data-bbox="747 548 1942 581">OR</td> </tr> <tr> <td data-bbox="747 581 1062 613">ITI</td> <td data-bbox="1062 581 1472 613">Relevant Trade</td> <td data-bbox="1472 581 1577 613">7</td> <td data-bbox="1577 581 1942 613">Site Execution (Civil Work)</td> </tr> </table>				Minimum Educational Qualification	Specialization	Relevant Industry Experience		Years	Specialization	B.E. / B.Tech	Civil / Mechanical Engineering	2	Site Execution (Civil Work)	OR				Diploma	Civil Engineering	5	Site Execution (Civil Work)	OR				ITI	Relevant Trade	7	Site Execution (Civil Work)
Minimum Educational Qualification	Specialization	Relevant Industry Experience																													
		Years	Specialization																												
B.E. / B.Tech	Civil / Mechanical Engineering	2	Site Execution (Civil Work)																												
OR																															
Diploma	Civil Engineering	5	Site Execution (Civil Work)																												
OR																															
ITI	Relevant Trade	7	Site Execution (Civil Work)																												
2.	Proctor's Qualification and experience in relevant sector (in years) (as per NCVET guidelines)	<table border="1"> <tr> <th data-bbox="747 656 1062 760" rowspan="2">Minimum Educational Qualification</th> <th data-bbox="1062 656 1472 760" rowspan="2">Specialization</th> <th colspan="2" data-bbox="1472 656 1942 704">Relevant Technical Experience</th> </tr> <tr> <th data-bbox="1472 704 1577 760">Years</th> <th data-bbox="1577 704 1942 760">Specialization</th> </tr> <tr> <td data-bbox="747 760 1062 808">Graduation</td> <td data-bbox="1062 760 1472 808">In Relevant Stream</td> <td data-bbox="1472 760 1577 808">1</td> <td data-bbox="1577 760 1942 808">-</td> </tr> <tr> <td colspan="4" data-bbox="747 808 1942 841">OR</td> </tr> <tr> <td data-bbox="747 841 1062 881">Diploma</td> <td data-bbox="1062 841 1472 881">In Relevant Stream</td> <td data-bbox="1472 841 1577 881">2</td> <td data-bbox="1577 841 1942 881">-</td> </tr> </table>				Minimum Educational Qualification	Specialization	Relevant Technical Experience		Years	Specialization	Graduation	In Relevant Stream	1	-	OR				Diploma	In Relevant Stream	2	-								
Minimum Educational Qualification	Specialization	Relevant Technical Experience																													
		Years	Specialization																												
Graduation	In Relevant Stream	1	-																												
OR																															
Diploma	In Relevant Stream	2	-																												
3.	Lead Assessor's/Master Assessor's Qualification and experience in relevant sector (in years) (as per NCVET guidelines)	<table border="1"> <tr> <th data-bbox="747 948 1062 1052" rowspan="2">Minimum Educational Qualification</th> <th data-bbox="1062 948 1472 1052" rowspan="2">Specialization</th> <th colspan="2" data-bbox="1472 948 1942 997">Relevant Industry Experience</th> </tr> <tr> <th data-bbox="1472 997 1577 1052">Years</th> <th data-bbox="1577 997 1942 1052">Specialization</th> </tr> <tr> <td data-bbox="747 1052 1062 1101">B.E. / B.Tech</td> <td data-bbox="1062 1052 1472 1101">Civil / Mechanical Engineering</td> <td data-bbox="1472 1052 1577 1101">10</td> <td data-bbox="1577 1052 1942 1101">Site Execution (Civil Work)</td> </tr> <tr> <td colspan="4" data-bbox="747 1101 1942 1133">OR</td> </tr> <tr> <td data-bbox="747 1133 1062 1174">Diploma</td> <td data-bbox="1062 1133 1472 1174">Civil Engineering</td> <td data-bbox="1472 1133 1577 1174">13</td> <td data-bbox="1577 1133 1942 1174">Site Execution (Civil Work)</td> </tr> </table>				Minimum Educational Qualification	Specialization	Relevant Industry Experience		Years	Specialization	B.E. / B.Tech	Civil / Mechanical Engineering	10	Site Execution (Civil Work)	OR				Diploma	Civil Engineering	13	Site Execution (Civil Work)								
Minimum Educational Qualification	Specialization	Relevant Industry Experience																													
		Years	Specialization																												
B.E. / B.Tech	Civil / Mechanical Engineering	10	Site Execution (Civil Work)																												
OR																															
Diploma	Civil Engineering	13	Site Execution (Civil Work)																												
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 5: Evidence of the need for the Qualification

Provide Annexure/Supporting documents name.

1	Latest Skill Gap Study (not older than 2 years) (Yes/No): Yes
2	Latest Market Research Reports or any other source (not older than 2 years) (Yes/No): Yes
3	Government /Industry initiatives/ requirement (Yes/No): Yes
4	Number of Industry validation provided: 27
5	Estimated nos. of persons to be trained and employed: 4,500 and 3,150
6	Evidence of Concurrence/Consultation with Line Ministry/State Departments (If “No”, why): No, Last Communication on 09/04/2025

Section 6: Annexure & Supporting Documents Checklist

Specify Annexure Name / Supporting document file name

1	Annexure: NCrf/NSQF level justification based on NCrf level/NSQF descriptors <i>(Mandatory)</i>	Yes
2	Annexure: List of tools and equipment relevant for qualification <i>(Mandatory, except in case of online course)</i>	Yes
3	Annexure: Detailed Assessment Criteria <i>(Mandatory)</i>	Yes
4	Annexure: Assessment Strategy <i>(Mandatory)</i>	Yes
5	Annexure: Blended Learning <i>(Mandatory, in case selected Mode of delivery is “Blended Learning”)</i>	No
6	Annexure: Multiple Entry-Exit Details <i>(Mandatory, in case qualification has multiple Entry-Exit)</i>	No
7	Annexure: Acronym and Glossary <i>(Optional)</i>	Yes
8	Supporting Document: Model Curriculum <i>(Mandatory – Public view)</i>	Yes
9	Supporting Document: Career Progression <i>(Mandatory - Public view)</i>	Yes
10	Supporting Document: Occupational Map <i>(Mandatory)</i>	Yes
11	Supporting Document: Assessment SOP <i>(Mandatory)</i>	Yes
12	Any other document you wish to submit:	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	- Process of reading and understanding routine drawings / sketches and Bar Bending Schedule (BBS). - Process of preparing, fabricating, placing and fixing reinforcement bars for RCC structures. - Process of working effectively in a team to deliver desired results at the workplace. - Process of planning and organizing work to meet expected outcomes - Process of working according to personal health, safety and environment protocols at the construction site.	As detailed, the entire process followed by a Bar Bender and Steel Fixer is to read and understand routine drawings / sketches and Bar Bending Schedule (BBS), carry out powder coating, prepare, fabricate, place and fix reinforcement bars for RCC structures. As the work is routine and is repeated multiple times, the work becomes predictable. As the Bar Bender and Steel Fixers are required to perform the task as per the required codes and standards following the method statement available for the task, they have a clear work situation.	4
Professional and Technical Skills/ Expertise/ Professional Knowledge	- Know how to read basic drawings/ sketches for bar bending and fixing works. - Know simple arithmetic calculations. - Know how to read and understand BBS - Know the different types of cover block, steel rods, binding wire and reinforcement bars. - Understand standard practices followed for reinforcement work.	The knowledge required for a Bar Bender and Steel Fixer is factual, as it is specific and limited to the knowledge of reading basic drawings/ sketches for bar bending and fixing works; simple arithmetic calculations; bar bending schedule; types of cover block, steel rods, binding wire and reinforcement bars; standard practices followed for reinforcement work; types of hand tools used for cutting and bending of reinforcement bars; types of power tools and accessories used for cutting, bending and threading of reinforcement bars; standard method of storing cut reinforcement bars and scrap materials, understand the standard practices	4

	• Know the types of hand tools used for cutting and bending of reinforcement bars • Know the different types of power tools and accessories used for cutting, bending and threading of reinforcement bars • Know the standard method of storing cut reinforcement bars and scrap materials • Understand the standard practices followed for the fabrication of reinforcement cage • Know the sequence for tying of reinforcement bars for in-situ and prefabrication works • Know the standard tolerance levels in reinforcement work	followed for the fabrication of reinforcement cage, sequence for tying of reinforcement bars for in-situ and prefabrication works; and the standard tolerance levels in reinforcement work. Therefore, their knowledge is applicable to their field of work only.	
Employment Readiness & Entrepreneurship Skills & Mind-set/Professional Skill	• Read and interpret correct detail from drawings, sketches and bar bending schedule • Select hand /power tools for cutting reinforcement bars • Select cutting blade for cutting machine • Select hand/power tools for bending reinforcement bars • Select bar bending accessories • Select reinforcement bars for placement as per the drawing • Calculate the numbers of couplers for connecting of reinforcement bars	As indicated the skill set is required to read and interpret correct detail from drawings, sketches and bar bending schedule; select hand /power tools for cutting reinforcement bars, cutting blade for cutting machine, hand/power tools for bending reinforcement bars, bar bending accessories, reinforcement bars for placement as per the drawing and calculate the numbers of couplers for connecting of reinforcement bars. .	4

Broad Learning Outcomes/Core Skill	● Carry out reading and understanding routine drawings/ sketches and Bar Bending Schedule (BBS). ● Use hand & power tools for cutting and bending reinforcement bars. ● Carry out the process to prepare, fabricate, place, and fix reinforcement bars for RCC structures as per Bar Bending Schedule (BBS).	The job holder is expected to carry out reading and understanding routine drawings/ sketches and Bar Bending Schedule (BBS), use hand & power tools for cutting and bending reinforcement bars, carry out the process to prepare, fabricate, place, and fix reinforcement bars for RCC structures as per Bar Bending Schedule (BBS).	4
Responsibility	The individual in this job role will be responsible for the below-mentioned activities: ● Read and understand routine drawings / sketches ● Read and understand Bar Bending Schedule (BBS) ● Use hand and power tools for cutting of reinforcement bars ● Use hand and power tools for bending of reinforcement bars ● Fabricate, place and fix reinforcement bars for R.C.C structures as per Bar Bending Schedule (BBS) and drawing ● Interact and communicate in an effective manner ● Support co-workers to execute the project requirements ● Practice inclusion ● Plan and prepare for work ● Organise required resources as per work plan ● Complete work as per the plan ● Follow safety norms as defined by the organization	A Bar bender and Steel Fixer is responsible for marking, cutting, bending, fabricating, placing and fixing reinforcement bars at the desired location using appropriate hand or power tools, within the specified time and defined tolerance limits, following safe work practices.	4

	● Adopt healthy & safe work practices ● Implement good housekeeping and environment protection process and activities ● Follow infection control guidelines as per applicability		
--	--	--	--

NSQC Approved

Annexure: Tools and Equipment (Lab Set-Up)

List of Tools and Equipment

Batch Size: 30 Candidates

S. No.	Tool / Equipment Name	Specification	Quantity for specified Batch size
1	Chisel	Number	30
2	Hammer	Number	30
3	Bar Tying Hook	Number	15
4	Bending Lever	Number	6
5	Gauge Measure	Number	6
6	Podger Spanner	Number	10
7	Hack Saw Blade and Frame	Number	10
8	Steel Scale- 3 ft	Number	30
9	Try Scale	Number	10
10	Spirit Level- 1 ft	Number	30
11	Spirit Level- 3 ft	Number	30
12	Plumb Bob	Number	30
13	Measurement Tape – 5m	Number	30
14	Cutting Machine	Number	1
15	Bending Machine	Number	1

16	Threading Machine	Number	1
17	M.S, TOR Steel	Number	15
18	TMT Steel Binding Wires	kgs	5
19	Cover Blocks	Number	60
20	Wooden Planks	Number	30
21	Reinforcement Bar Tying Machine	Number	1
22	Lifting Appliance (Sling, Shackle, Belts)	Number	1
23	Steel Cutting Blade	Number	30
24	Mechanical Coupler	Number	10
25	Safety Helmet	Number	30
26	Safety Goggles	Number	30
27	Safety Shoes	pair	30
28	Safety Belt	Number	30
29	Cotton Gloves	Number	30
30	Ear Plugs / Ear Protection	Number	30
31	Reflective Jackets,	Number	30
32	Dust Mask / Nose Mask	Number	30
33	Fire Prevention Kit	set	3
34	Jump Suit	Number	30

35	Leather Hand Gloves	Number	30
36	Wire Brush	Number	15
37	Hand and Leg Guard Leather	Number	15
38	Fire Extinguisher	Number	2
39	Sand Buckets	Number	5
40	Flashback Arrestors	Number	10
41	Welding Helmet	Number	30
42	Welding Glass	Number	30
43	First Aid Box	Number	2
44	Safety Tags	Number	5
45	Safety Notice Board / Safety Message Board	Number	5
46	Drawings of Various Types of Structures and Structural Elements	Number	10
47	Bar Bending Schedule Sample	Number	10
48	Model Room	Number	1
49	Bench Top Cut off Saw	Number	1
50	Angle Grinder	Number	10
51	Manual Bar Bender	Number	10
52	Measurement Tape – 30 m	Number	10
53	Rebar Cutter (Manual)	Number	10

54	Plier	Number	30
55	Wire Cutter (Snips)	Number	30

Classroom Aids

The aids required to conduct sessions in the classroom are:

1. Training Kit (Trainer Guide, Presentations)
2. Whiteboard/ Blackboard
3. Marker
4. Projector
5. Working Model

Annexure: Industry Validations Summary

Provide the 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	Larsen and Toubro Ltd	J Raguraman	Head, CSTD	PB No 979, Mount Poonamallee Road, Manapakkam, Chennai, 600089	9943247482	jraguraman@Intecc.com	
2	National Academy of Construction	M Indra Kiran	Director	Near SS Convention Center, Labbipet, Vijayawada, Andhra Pradesh, PIN: 520010	984947 0249	nacaptrainings@gmail.com	
3	Indian Institute of Infrastructure and Construction	Prof. (Dr.) B. Sunil Kumar	Director, IIIC	Near Chavara Bridge, AMC, Puthanthura Post,	9895013924	director@iiic.ac.in	

				Neendakara - 69L582, Kollam. Kerala			
4	JK Cement Ltd	Ashish Singh	General Manager	Kamla Tower, Kanpur Nagar, UP, 208001	9468837057	ashish.singh1@jkcement .com	
5	Kamac Engineers Pvt Ltd	Yudhajit Saha	Manager – Contracts & Planning	Ramkrishna Samity Building, Panitanki More, 40/107, Sevoke Rd, Ward 11, Near Pani Tanki More (Clock Tower), Siliguri, West Bengal 734001	8240040261	planning@kamac.in	
6	One Naga Construction Private Limited	Tunito Alex Zhimomi	CEO	DR.N. Theuno; Bayavu; Near N.B.S Office Area; Kohima; Kohima; Nagaland; 797001; India	7005715093	alexzim881@gmail.com	
7	OP Jindal Community College	Om Prakash Verma	Principal	O P Jindal Industrial Park, Tumidih, Chhattisgarh 496107		omprakash.verma@opjc craigarh.edu.in	
8	Poddar Infratech Pvt Ltd	Ms. Neha Devgan	Contracts Manager	202, Crowne Heights, Sector 10 , Rohini , New Delhi	8449521881	letters@poddarinfra.co m	
9	Solidstone Constructions	Pragadeeshwaran R J	Principal Designer & Chief Execution (Civil)	7/2 Perumal Nagar, No4 Veerapandi, CBE – 19	7904788630	solidstone.projects@gm ail.com	linkedin.com/i n/pragadeesh waran-r-j- 6baab7193
10	Star Projects Services Pvt Ltd	H. Asgar	9811376288	K-108 A, First Floor, Above JD Saloon, Thokar No. 5, Abul Fazal	9811376288	starprojectsservices@g mail.com	

				Enclave Part –I, Jamia Nagar, Okhla, N. Delhi 25			
11	Uralungal Labour Contract Co- operative Society	Prem Anand C	Deputy Manager, Learning & Development	Madappally College, Vadakara, 673102 Kozhikode - 673102. Kerala, India	8921763984	prem.anand@ulccs.com	
12	Route To Connect	Hrisikesh Kashyap	Founder	Bagharbari, Guwahati, Assam	8720905111	hrisi@rtsseven.in	
13	AK Consulting	Nirman Jain	Technical Head	6th Cross Rd, 1st Stage, Kadugondanahalli, Bengaluru, Karnataka 560045	7042447336	nirmanjain777@gmail.c om	
14	Artificial Intelligence Technologies Ltd	Rohit Kumar Sharma	Sr. Developer	A-21 Kailash Colony, New Delhi – 110048	9927564461	rohit.sharma@aitunivers al.com	
15	Asirbadh Projects and Infrastructure Limited	Kunwar Jee	GM (Projects)	A.G. Office Road, Doanda, Ranchi-834002, Jharkhand.	7858801901	ahplmd@yahoo.com	
16	Donge Project Management Consultants Pvt. Ltd.	Balkrishna Kulkarni	President	401, Imperial Heights, Akshar Chowk, OP Road, Vadodara	9819657656	balkrishna.kulkarni@don grePMC.com	
17	Ephicacy Lifescience Analytics	Rahul Kumar Kaushik	Sr. Manager	2nd Main Rd, Sarvobhogam Nagar, Arekere, Bengaluru, Karnataka 560076	8859885973	rahul.Kaushik@ephicacy .com	
18	Freelance Architect (Individual Consultant)	Garvit Sharma	Architect	A-101 Radha Krishna Lane, Kaushambi, Ghaziabad, U.P	9971967901	grsharma97@gmail.com	

19	Institute of Management Technology	Sandeep Sharma	Chief Project Engineer & Senior Counsellor	Raj Nagar, Ghaziabad, UP, 201001	9810566031	sharma.sandyk@gmail.com	
20	Know How Schools	Dipesh Bafna	Partner	Know How Schools LLP, C 601, Royal Casa, Ravet, Pune, 412101	9405266123	learn@knowhowschools.com	
21	L& T Skill Trainers Academy	DK Sharma	Principal - CSTI	Larsen & Toubro Ltd. Near Custom House, Versova Creek Madh Jetty, Madh, Mumbai, 400061	7660986699	deepaks@Intecc.com	
22	LK Engicons	Sameer	Owner	114, Bhawanpur, Meerut, UP, 250001	9808170639	sales@lkengicons.com	
23	Manpower Group Services India	Durgesh Begariya	Head Branch Operations	Unit-4 A/1 and A/2, 4th Floor, Plot No. 6, Uppal Plaza, Jasola, New Delhi	9824054165	durgesh.b@manpower.co.in	
24	Senryaku Management Private Limited	Udit Kumar	Consultant	UTC031, DLF The Ultima, Sector 81, Gurugram, HR 122004	9690909024	udit.kau@gmail.com	
25	Shrikant Gajanan Mhatre -Consulting Engineer & Valuer	Shrikant Gajanan Mhatre	Consulting Engineer & Valuer	Reg. No. CCRDP / R / 2022 / APL/ 00305 Approved Valuer No. -LM / CAT - I/ F - 4860, C P No. -180. SHIV NIWAS / Sagar Society, Private High School Road I Pen -Raigad -Maharashtra - India . 402 107.	9689728209	sshri1000@gmail.com	

26	Sunbright Manpower Solutions Pvt. Ltd	Arun Kumar	Supervisor	Shop No. 3144, Main Road, Narasapura, Kolar Taluk, Bangalore, Karnataka, 563133	7338463588	bangalore@sunbrightgroup.com	
27	ATS Homekraft	Bhumit Kamboj	General Manager, Program	ATS HomeKraft, 4th Floor, ATS Tower, Plot no-16, Sector-135, Noida-201305	9873951040	bhumit.kamboj@homekraft.in	

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
2025-26	1,000	700	200	140	Subject to the requirement of the Industry	Subject to the requirement of the Industry
2026-27	1,500	1,050	300	210	Subject to the requirement of the Industry	Subject to the requirement of the Industry
2027-28	2,000	1,400	400	280	Subject to the requirement of the Industry	Subject to the requirement of the Industry

Data to be provided year-wise for next 3 years

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

Qualification Version	Year	Total Candidates				Women				People with Disability			
		Trained	Assessed	Certified	Placed	Trained	Assessed	Certified	Placed	Trained	Assessed	Certified	Placed
V 3.0	2022-23	16	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA
V 3.0	2023-24	397	16	15	15	NA	NA	NA	NA	NA	NA	NA	NA
V 3.0	2024-25	2,682	730	467	450	NA	NA	NA	NA	NA	NA	NA	NA

Applicable for revised qualifications only, data to be provided year-wise for past 3 years.

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

1. AICTE
2. APSSDC
3. ASDM
4. CPWD
5. CSR
6. DDUGKY
7. Directorate of Skill Development
8. MoRTH
9. NULM
10. PMKVY 2.0
11. PMKVY 3.0
12. PMKVY 4.0
13. UPSDM
14. YuvaKeralam

Content availability for previous versions of qualifications:

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

Languages in which Content is available: English

Annexure: Blended Learning

Blended Learning Estimated Ratio & Recommended Tools:

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

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

S. No.	Select the Components of the Qualification	List Recommended Tools – for all Selected Components	Offline: Online Ratio
1	☐ Theory/ Lectures - Imparting theoretical and conceptual knowledge	NA	NA
2	☐ Imparting Soft Skills, Life Skills, and Employability Skills /Mentorship to Learners	NA	NA
3	☐ Showing Practical Demonstrations to the learners	NA	NA
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	NA	NA
7	☐ On the Job Training (OJT)/ Project Work Internship/ Apprenticeship Training	NA	NA

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
Read and understand routine drawings / sketches and Bar Bending Schedule (BBS)	<i>Read and understand routine drawings / sketches</i>	15	35		
	PC1. interpret basic detail like type, dimension, angle/ position of bend and layout plan from the sketches / drawings				
	PC2. interpret fixing/insertion sequence from the drawings				
	PC3. derive the orientation and position of reinforcement bars from the drawing				
	PC4. interpret drawing to calculate number of chairs and spacer bars to be used				
	PC5. find out the size and type of cover block to be used from the drawing				
	PC6. interpret basic sketches to calculate the required cutting length				
	PC7. interpret drawing/sketches for calculating scope of work and to plan for cutting, bending and fabricating of reinforcement bars				
	<i>Read and understand Bar Bending Schedule</i>	15	35		
	PC8. read and interpret correct detail from bar bending schedule including type, diameter, shape, cutting length and number of reinforcement bars				
	PC9. interpret BBS to calculate the cutting length of reinforcement bars				
	PC10. interpret the terms used in bar bending schedule				
	PC11. interpret the BBS to estimate quantity of work.				
	PC12. interpret details from BBS to efficiently plan for cutting reinforcement bars with minimum wastage				
	Total Marks	30	70	-	-

NOS / Module Name	Assessment Criteria for Performance Criteria/Learning Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Use hand and power tools for cutting and bending of reinforcement bars	<i>Use hand and power tools for cutting of reinforcement bars</i>	15	35		
	PC1. select hand /power tools for cutting reinforcement bars as per requirement / instruction				
	PC2. select cutting blade for cutting machine used for reinforcement bars as per requirement / instruction				
	PC3. use measurement and marking tool to mark reinforcement bars for cutting as per specified length mentioned in Bar Bending Schedule (BBS)				
	PC4. place reinforcement bars properly for cutting as per requirement and instruction				
	PC5. ensure the number of reinforcement bars to be cut at any given time is as per the manufacturer's guidelines				
	PC6. maintain correct body posture while cutting reinforcement bars manually or mechanically				
	PC7. tag and stack reinforcement bars after cutting as per standard practices				
	<i>Use hand and power tools for bending of reinforcement bars</i>	15	35		
	PC8. select hand/power tools for bending reinforcement bars as per requirement				
	PC9. select bar bending accessories as per the diameter of reinforcement bars				
	PC10. mark, place and fix the reinforcement bars as per the position of bending				
	PC11. maintain correct body posture while bending rebars manually or mechanically				
	PC12. bend reinforcement bars as per the shape and dimensions given in the Bar Bending Schedule (BBS)				
	PC13. check to ensure that the length and shape of reinforcement bars are as per the Bar Bending Schedule (BBS) within the tolerance limit				

	PC14. tag and stack reinforcement bars after bending as per standard practices				
	PC15. use appropriate personal protective equipment and follow organizational safety guidelines while cutting and bending of reinforcement bars				
	Total Marks	30	70		

NOS / Module Name	Assessment Criteria for Performance Criteria/Learning Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Prepare, fabricate, place and fix reinforcement bars for RCC structures	<i>Fabricate, place and fix reinforcement bars for R.C.C structures as per Bar Bending Schedule (BBS) and drawing</i>	30	70		
	PC1. interpret relevant specification given in the sketches/drawing/BBS for fabrication and fixing of reinforcement bars				
	PC2. determine correct method of insertion/ fixing of reinforcement bars as per the types of structure				
	PC3. select reinforcement bars for placement as per the drawing				
	PC4. mark, place, and fix the reinforcement bars as per sketch/drawing				
	PC5. maintain uniform spacing between the bars, stirrups and link rod as per the drawing				
	PC6. calculate the numbers of couplers for connecting of reinforcement bars as per requirement				
	PC7. stagger the lap avoiding more than 50% splicing while fabricating the reinforcement cage				
	PC8. place and fix mechanical coupler as per drawing/BBS				
	PC9. tie reinforcement bars with approved binding wires as per drawing				
	PC10. use appropriate personal protective equipment and follow organizational safety guidelines while fabricating and				

	fixing reinforcement cage				
	PC11. ensure that the sequence of tying is as per method statement				
	PC12. fabricate the reinforcement cage and fix it at its position as per the drawing				
	PC13. place and fix chairs at specified spacing to maintain correct thickness				
	PC14. ensure cover blocks and spacers are placed to maintain appropriate covers and spacing				
	PC15. check for the accuracy of location, position and tying of reinforcement bars				
	PC16. provide suitable stiffeners for lifting in case of prefabricated cage				
	PC17. check the reinforcement work and verify it as per the drawing				
	PC18. report the executed work to the superior for quality checks				
	PC19. take corrective action in case of any error/deviation in work as per instructions				
	PC20. ensure optimum utilization and minimum wastage of material during the fabrication of reinforcement cage				
	Total Marks	30	70		

NOS / Module Name	Assessment Criteria for Performance Criteria/Learning Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Work effectively in a team to deliver desired results at the workplace	<i>Interact and communicate in an effective manner</i>	18	42		
	PC1. pass on work related information/ requirement clearly to the team members				

	PC2. inform co-workers and superiors about any kind of deviations from work				
	PC3. report any unresolved problem to the supervisor immediately				
	PC4. obtain instructions from superiors and respond on the same				
	PC5. communicate to team members/subordinates for appropriate work technique and method				
	PC6. seek clarification and advice as per the requirement				
	<i>Support co-workers to execute the project requirements</i>	6	14		
	PC7. hand over the required material, tools, tackles, equipment and work fronts timely to interfacing teams				
	PC8. work together with co-workers in a synchronized manner				
	<i>Practice inclusion</i>	6	14		
	PC9. maintain cultural inclusivity at workplace				
	PC10. maintain disability friendly work practices				
	PC11. follow gender neutral practices at workplace				
	PC12. address discriminatory and offensive behaviour in a professional manner as per organizational policy				
Total Marks		30	70		

NOS / Module Name	Assessment Criteria for Performance Criteria/Learning Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
	<i>Plan and prepare for work</i>	9	21		

Plan and organize work to meet expected outcomes	PC1. identify the targets and timelines set by superiors				
	PC2. determine the work requirements corresponding to task(drawings/schedules/instructions/methodology), safety, tools and equipment prior to commencement of task				
	PC3. plan the work by analyzing the required outcomes, work procedures, allotted time, resource availability and known priorities				
	PC4. prepare the work areas in coordination with team members				
	PC5. plan for waste collection and disposal prior to and after completion of work				
	<i>Organise required resources as per work plan</i>				
	PC6. arrange the required manpower prior to commencement of work	6	14		
	PC7. organize the required materials, tools and tackles required for the task				
	<i>Complete work as per the plan</i>				
	PC8. engage allocated manpower in an appropriate manner	15	35		
	PC9. employ correct tools, tackles and equipment for the desired work				
	PC10. provide guidance to the subordinates to obtain desired outcome				
	PC11. use resources in an optimum manner to avoid any unnecessary wastage				

	PC12. use tools, tackles and equipment carefully to avoid damage				
	PC13. ensure the work processes adopted are in line with the specified standards and instructions				
	PC14. complete the work with the allocated resources within specified time				
	PC15. clean and organise the workplace after completion of task				
	Total Marks	30	70		

NOS / Module Name	Assessment Criteria for Performance Criteria/Learning Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Work according to personal health, safety and environment protocols at construction site	<i>Follow safety norms as defined by the organization</i>	6	14		
	PC1. identify and report any hazards, risks or breaches in site safety to the appropriate authority				
	PC2. follow emergency and evacuation procedures in case of accidents, fires, natural calamities				
	PC3. follow recommended safe practices in handling construction materials, including chemical and hazardous material whenever applicable				
	PC4. follow all the protocols and safety techniques conveyed during safety awareness programs like Tool Box Talks, safety demonstrations and mock drills conducted at the site				

PC5. select and operate different types of fire extinguishers corresponding to various types of fires as per EHS guideline	15	35		
PC6. identify near miss, unsafe condition and unsafe act				
<i>Adopt healthy & safe work practices</i>				
PC7. use appropriate Personal Protective Equipment (PPE) as per work requirements for : Head Protection, Ear protection, Fall Protection, Foot Protection, Face and Eye Protection, Hand and Body Protection , and Respiratory Protection (if required)				
PC8. handle all required tools, tackles, materials and equipment safely				
PC9. follow safe disposal of waste, harmful and hazardous materials as per EHS guidelines				
PC10. check and install all safety equipment as per standard guidelines				
PC11. follow safety protocols and practices as laid down by site EHS department				
PC12. obtain "height pass" clearance for working at heights	6	14		
<i>Implement good housekeeping practices</i>				
PC13. collect, segregate and deposit construction waste into appropriate containers based on their toxicity or hazardous nature				
PC14. apply ergonomic principles wherever required	3	7		
<i>Follow infection control guidelines as per applicability</i>				
PC15. follow recommended personal hygiene, workplace hygiene and sanitization practices				

	PC16. clean and disinfect all materials, tools and supplies before and after use				
	PC17. report immediately to concerned authorities regarding signs and symptoms of illness of self and others				
	Total Marks	30	70		

NOS / Module Name	Assessment Criteria for Performance Criteria/Learning Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Employability Skills (30 Hours)	<i>Introduction to Employability Skills</i>				
	PC1. understand the significance of employability skills in meeting the job requirements	1	1		
	<i>Constitutional values – Citizenship</i>				
	PC2. identify constitutional values, civic rights, duties, personal values and ethics and environmentally sustainable practices	1	1		
	<i>Becoming a Professional in the 21st Century</i>				
	PC3. explain 21st Century Skills such as Self- Awareness, Behaviour Skills, Positive attitude, self-motivation, problem-solving, creative thinking, time management, social and cultural awareness, emotional awareness, continuous learning mindset etc.	1	3		
	<i>Basic English Skills</i>				
	PC4. speak with others using some basic English phrases or sentences	2	3		
	<i>Communication Skills</i>				
	PC5. follow good manners while communicating with others	1	1		
	PC6. work with others in a team				

<i>Diversity & Inclusion</i>				
PC7. communicate and behave appropriately with all genders and PwD	1	1		
PC8. report any issues related to sexual harassment				
<i>Financial and Legal Literacy</i>				
PC9. use various financial products and services safely and securely	3	4		
PC10. calculate income, expenses, savings etc.				
PC11. approach the concerned authorities for any exploitation as per legal rights and laws				
<i>Essential Digital Skills</i>				
PC12. operate digital devices and use its features and applications securely and safely	4	6		
PC13. use internet and social media platforms securely and safely				
<i>Entrepreneurship</i>				
PC14. identify and assess opportunities for potential business	3	5		
PC15. identify sources for arranging money and associated financial and legal challenges				
<i>Customer Service</i>				
PC16. identify different types of customers	2	2		
PC17. identify customer needs and address them appropriately				
PC18. follow appropriate hygiene and grooming standards				
<i>Getting ready for apprenticeship & Jobs</i>	1	3		

	PC19. create a basic biodata				
	PC20. search for suitable jobs and apply				
	PC21. identify and register apprenticeship opportunities as per requirement				
	Total Marks	20	30	-	-

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:

Assessment is done through CSDCI affiliated Assessment Agencies. Assessors are trained & certified by CSDCI after Training Of Assessor (TOA) program. Assessments is conducted to gauge and assess the trainee's skill and knowledge competency in the specified areas. The assessment will have both theory and practical components in 30:70 ratio for **Bar Bender and Steel Fixer** job role.

During the practical task, trainees are assessed on their workmanship, quality of finished product and time management. They will be graded for all their assessments based on the approved assessment strategy which is signed off by CSDCI. The Assessor submits an assessment plan to CSDCI prior to assessments.

The assessment plan contains the following information:

- What will be assessed, i.e. the competency based on each NOS based on theory and practical questions
- How assessment will occur i.e. methods of assessment
- When the assessment will occur
- Duration of assessment
- Where the assessment will take place i.e. context of the assessment (workplace/simulation)
- The criteria for decision making i.e. those aspects that will guide judgments
- Where appropriate, any supplementary criteria used to make a judgment on the level of performance.

2. Testing Environment:

- Training partner shares the batch start date and end date, number of trainees and the job role.
- Assessment will be fixed for a day after the end date of training. It could be next day or later. Assessment will be conducted at the training venue/test center.
- The knowledge/theory assessments is conducted with proper seating arrangements with enough space between the candidates to prevent mal-practicing.
- Question set for theory and practical will be distributed to each candidate by the Assessor. Theory testing will include multiple choice questions, pictorial question, etc. which will test the trainee on his theoretical knowledge of the subject. The skill /practical assessments will be conducted in the approved test centers. The training provider will ensure adequate tools and materials are available to conduct the practical test.
- If number of candidates are more than 30, more assessors will be organized on same day to complete the assessment.
- The assessment has to comprise of two components, namely:

- Knowledge assessment (theory/viva assessment)
- Skill assessment (practical/hands-on skill assessment)

3. Mode of assessment:

- Demonstration/Practical for Performance /Skill Assessment
- Synoptic multiple-choice question test
- Viva for Knowledge Assessment

4. Performance/skill assessment:

- The performance/skill assessment will be conducted through demonstration/practical
- For the practical test trainees are assessed through a given task, which they have to complete correctly for them to be marked as passed.
- The assessment is conducted in a simulated working environment. Due to this fact, the assessors must note that the naturally occurring evidence of competence is unavailable or infrequent. Simulation must be undertaken in a Realistic Working Environment which provides an environment that replicates the key characteristics of the workplace in which the skill to be assessed is normally employed.

5. Knowledge Assessment:

- The knowledge assessments are conducted through written test/ viva.
- Synoptic test is used for this. It is an MCQ (Multiple Choice Question) test which are prepared externally and externally marked, meaning by agency having no link with training partners. The test may be conducted by the assessor in the oral mode, if required, considering the lack of reading and comprehending acumen (skills) of trainees. In such cases, the assessor will mention it on top of the MCQ submitted to CSDCI.
- The assessment strategy, weightage and duration of assessment for **Bar Bender and Steel Fixer** is summarized below

Assessment Type	Formative or Summative	Strategies	Weightage	Duration (hours)
Knowledge	Summative	MCQ/Viva	30	1.5
skill	Summative	Structured Practical Task	70	5.5

6. Assessment Quality Assurance framework:

- CSDCI has developed assessment criteria framework for each Qualification pack as per National Occupational Standards. The criteria framework includes weightages/marks for each criterion under knowledge and skill. The criteria ensure quality assurance as it ensures valid, consistent and fair assessments at all locations. Issued to the affiliated Assessment body. The Assessment body develop questions based on CSDCI issued assessment criteria.
- Evidences in the form of answer sheets in case of knowledge assessments are collected. For skill assessments videos and photographs are prepared as evidence. These are submitted by the assessor to the assessment agency. CSDCI does random checks of the same with the participant/ trainee's ID and ascertains authenticity and validity of assessments.

- The training partner will intimate the time of arrival of the assessor and time of leaving the venue. Random spot checks/audit is conducted by CSDCI to monitor assessment.

7. Methods of Validation:

- Unless the trainee is registered, the person cannot undergo assessment. To further ensure that the person registered is the person appearing for assessment, ID verification is carried out. Aadhar card number is part of registering the candidate for training. This forms the basis of further verification during the assessment.
- Assessor conducts the assessment through theory and practical questions developed in accordance with the assessment criteria and guidelines issued by CSDCI. This too is verified by random audits carried out by CSDCI.
- Evidences for assessments are to be collected and submitted to CSDCI for verification as per demand.
- Assessment agency is responsible to put details in SIP. CSDCI will also validate the data and result received from the assessment agency.

8. Method of assessment documentation and access:

- The assessment agency will upload the result of assessment in the portal. The data will not be accessible for change by the assessment agency after the upload. The assessment data will be validated by CSDCI assessment team. After upload, only CSDCI can access this data.
- CSDCI approves the results within five days after which results are uploaded on SIDH by Assessment Agency.

9. On the Job:

- On job training (OJT), candidates undergo training and learning at actual workplace for a fixed period of time and a certain weightage of assessment is allocated out of total skill weightage of Qualification Pack for undergoing OJT as stipulated by CSDCI. This OJT score and assessors' end point score are combined to arrive at final Marking/grading of trainees' skill test. The OJT score is determined by Supervisor of company under which candidates undergo on job training.

Annexure: Acronym and Glossary

<i>Acronym</i>	<i>Description</i>
MSDE	Ministry of Skill Development and Entrepreneurship
NCVET	National Council for Vocational Education and Training
NSDC	National Skill Development Corporation
SIDH	Skill India Digital Hub
CSDCI	Constriction Skill Development Council of India
AB	Awarding Body
SSC	Sector Skill Council
PMKVY	Pradhan Mantri Kaushal Vikas Yojana
DDU-GKY	Deen Dayal Upadhyaya Grameen Kaushalya Yojana
SANKALP	Skill Acquisition and Knowledge Awareness for Livelihood Promotion
STRIVE	Skills Strengthening for Industrial Value Enhancement
JSS	Jan Shikshan Sansthan
STT	Short Term Training
RPL	Recognition of Prior Learning
NAPS	National Apprenticeship Promotion Scheme
AA	Assessment Agency
TP	Training Provider / Training Partner
TC	Training Centre
ITI	Industrial Training Institute
NSQC	National Skill Qualification Committee
NSQF	National Skills Qualification Framework
Q-File	Qualification File
QP	Qualification Pack
MC	Model Curriculum
NOS	National Occupational Standards
PC	Performance Criteria
KU	Knowledge and Understanding
GS	Generic Skills
MCQ	Multiple Choice Question

EHS	Environment Health and Safety
PPE	Personal Protective Equipment
QA/QC	Quality Assurance / Quality Control
BBW	Bar Bending Work
SFW	Steel Fixing Work
BBS	Bar Bending Schedule
RCC	Reinforced Cement Concrete
TMT	Thermo-Mechanically Treated (Steel Bars)
MSB	Mild Steel Bars
RRB	Ribbed Reinforcement Bars
RCW	Reinforcement Construction Work
SBF	Steel Bending and Fixing
RBW	Rebar Bending Work

Glossary

Term	Description
National Occupational Standards (NOS)	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 also do.
Qualification	A formal outcome of an assessment and validation process which is obtained when a competent body determines that an individual has achieved learning outcomes to given standards
Qualification File	A Qualification File is a template designed to capture necessary information of a Qualification from the perspective of NSQF compliance. The Qualification File will be normally submitted by the awarding body for the qualification.
Sector	A grouping of professional activities on the basis of their main economic function, product, service or technology.
Long Term Training	Long-term skilling means any vocational training program undertaken for a year and above. https://ncvet.gov.in/sites/default/files/NCVET.pdf

Annexure: Career Progression

