

QUALIFICATION FILE

Concrete Construction Work (WorldSkills)

Short Term Training (STT) Long Term Training (LT) Apprenticeship

Upskilling Dual/Flexi Qualification For ToT For ToA

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

NCrF/NSQF Level: 4.5

Submitted By:

Construction Skill Development Council of India

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Section 1: Basic Details

| 1. | Qualification Name | Concrete Construction Work (WorldSkills) | | | | | | | | | | | | | | | | | | | | | | |
|-------------------------|---|---|-----------------------|--|---------------|--|-------------------------|----------------|-------------------|-----------------------|-------------------------|---------------|---------------------|-----|-----|--|--|-----|--------|--|--|--|--|--|
| 2. | Sector/s | Construction | | | | | | | | | | | | | | | | | | | | | | |
| 3. | Type of Qualification: <input checked="" type="checkbox"/> New <input type="checkbox"/> Revised <input type="checkbox"/> Has Electives/Options <input type="checkbox"/> OEM | NQR Code & version of existing/previous qualification: (change to previous, once approved) | | Qualification Name of existing/previous version: NA | | | | | | | | | | | | | | | | | | | | |
| 4. | a. OEM Name b. Qualification Name (Wherever applicable) | NA | | | | | | | | | | | | | | | | | | | | | | |
| 5. | National Qualification Register (NQR) Code & Version (Will be issued after NSQC approval) | QG-4.5-CO-01793-2024-V1-CSDCI, v 1.0 | | 6. NCrF/NSQF Level: 4.5 | | | | | | | | | | | | | | | | | | | | |
| 7. | Award (Certificate/Diploma/Advance Diploma/ Any Other (Wherever applicable specify multiple entry/exists also & provide details in annexure) | Certificate | | | | | | | | | | | | | | | | | | | | | | |
| 8. | Brief Description of the Qualification | A Concrete Construction Worker generally works on commercial and residential projects. There is a direct relationship between the nature and quality of the product required and the payment made by the customer. Therefore, the Concrete Construction Worker has a continuing responsibility to work professionally in order to meet the requirements of the customer and thus maintain and grow the business. | | | | | | | | | | | | | | | | | | | | | | |
| 9. | Eligibility Criteria for Entry for Student/Trainee/Learner/Employee | a. Entry Qualification & Relevant Experience: The Competitors must not be older than 22 years in the year of the Competition. | | | | | | | | | | | | | | | | | | | | | | |
| 10. | Credits Assigned to this Qualification, Subject to Assessment (as per National Credit Framework (NCrF)) | 17 | | 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) | <input checked="" type="checkbox"/> Offline <input type="checkbox"/> Online <input type="checkbox"/> Blended <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Training Delivery Modes</th> <th>Theory (Hours)</th> <th>Practical (Hours)</th> <th>OJT Mandatory (Hours)</th> <th>OJT Recommended (Hours)</th> <th>Total (Hours)</th> </tr> </thead> <tbody> <tr> <td>Classroom (offline)</td> <td>150</td> <td>360</td> <td></td> <td></td> <td>510</td> </tr> <tr> <td>Online</td> <td></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) | OJT Recommended (Hours) | Total (Hours) | Classroom (offline) | 150 | 360 | | | 510 | Online | | | | | |
| Training Delivery Modes | Theory (Hours) | Practical (Hours) | OJT Mandatory (Hours) | OJT Recommended (Hours) | Total (Hours) | | | | | | | | | | | | | | | | | | | |
| Classroom (offline) | 150 | 360 | | | 510 | | | | | | | | | | | | | | | | | | | |
| Online | | | | | | | | | | | | | | | | | | | | | | | | |
| 14. | Aligned to NCO/ISCO Code/s (if no code is available mention the same) | NCO-2015/7112.0200 | | | | | | | | | | | | | | | | | | | | | | |

| | | | |
|-----|--|---|--|
| 15. | Progression path after attaining the qualification (Please show Professional and Academic progression) | NA | |
| 16. | Other Indian languages in which the Qualification & Model Curriculum are being submitted | NA | |
| 17. | Is similar Qualification(s) available on NQR-if yes, justification for this qualification | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No URLs of similar Qualifications: | |
| 18. | Is the Job Role Amenable to Persons with Disability | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If "Yes", specify applicable type of Disability: | |
| 19. | How Participation of Women will be Encouraged | Participation of women in skill competitions is essential to empower them. Women today form a significant part of the workforce, however, the recognition of their participation in it has always been vastly underestimated. One way to improve their meaningful participation is improving their skill capacity. Women today possess a variety of advantages in both technical and soft skills. For example, social skills, analytical skills, managerial skills, mechanical skills, and more. Skill initiatives must be taken to help with the growth of women in the workforce, our economy and our society. By following the mentioned strategies, we can ensure the participation of females in Skill Competitions: Equal access to Education, Awareness and Outreach, Role Models and Mentorship, Flexible Learning Opportunities, Financial Support (if required), Safe and Inclusive Spaces, Employer Partnerships, Networking Opportunities, Recognition and Rewards. | |
| 20. | Are Greening/ Environment Sustainability Aspects Covered (Specify the NOS/Module which covers it) | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (CON/N4101) | |
| 21. | Is Qualification Suitable to be Offered in Schools/Colleges | Schools <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Colleges <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | |
| 22. | Name and Contact Details of Submitting / Awarding Body SPOC (In case of CS or MS, provide details of both Lead AB & Supporting ABs) | Name: Neha Sharma Dave Email: neha@csdcindia.org Contact No.: 0124-4513915-18 Ext-22 Website: www.csdcindia.org | |
| 23. | Final Approval Date by NSQC: 06/02/2024 | 24. Validity Duration: <i>2 years</i> | 25. Next Review Date: <i>06/02/2026</i> |

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 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. | Work organization, management and communication | CON/N4101 | Non-core | 4.5 | 2 | 20 | 40 | | | 60 | 30 | 70 | | | 100 | 10 |
| 2. | Interpretation of drawings | CON/N4103 | Core | 4.5 | 1 | 10 | 20 | | | 30 | 30 | 70 | | | 100 | 10 |
| 3. | Setting out and measurement | CON/N4104 | Core | 4.5 | 2 | 20 | 40 | | | 60 | 30 | 70 | | | 100 | 15 |
| 4. | Construction of Test Project (Concrete Construction Work) | CON/N4110 | Core | 4.5 | 9 | 80 | 190 | | | 270 | 30 | 70 | | | 100 | 50 |
| 5. | Quality Check and Handover | CON/N4105 | Core | 4.5 | 3 | 20 | 70 | | | 90 | 30 | 70 | | | 100 | 15 |
| Duration (in Hours) / Total Marks | | | | | 17 | 150 | 360 | | | 510 | 150 | 350 | | | 500 | 100 |

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) | B. Tech in Relevant Trade (2 Year) Diploma in Relevant Trade (3 Years) ITI in Relevant Trade (6 Years) General BA/BSc. / EX-Army/ 12th in Relevant Trade (6 Years) |
| 2. | Master Trainer's Qualification and experience in the relevant sector (in years) (as per NCVET guidelines) | Graduate in Relevant Trade (8 years) Diploma in Relevant Trade (10 years) ITI in Relevant Trade (13 Years) |
| 3. | Tools and Equipment Required for Training | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (If "Yes", details to be provided in Annexure) |
| 4. | In Case of Revised Qualification, Details of Any Upskilling Required for Trainer | NA |

Section 4: Assessment Related

| | | |
|----|---|---|
| 1. | Assessor's Qualification and experience in relevant sector (in years) (as per NCVET guidelines) | B. Tech in Relevant Trade (2 years) Diploma in Relevant Trade (5 years) ITI in Relevant Trade (7 years) |
| 2. | Proctor's Qualification and experience in relevant sector (in years) (as per NCVET guidelines) | B. Tech in Relevant Trade (2 years) Diploma in Relevant Trade (5 years) ITI in Relevant Trade (7 years) |
| 3. | Lead Assessor's/Proctor's Qualification and experience in relevant sector (in years) (as per NCVET guidelines) | Diploma in Relevant Trade (10 years) Graduate in Relevant Trade (8 years) ITI in Relevant Trade (13 Years) General BA/B.Sc/Ex-Army/12 th in Relevant Trade (13 Years) |
| 4. | Assessment Mode (Specify the assessment mode) | Offline |
| 5. | Tools and Equipment Required for Assessment | <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. | Latest Skill Gap Study (not older than 2 years) (Yes/No): NA |
|----|---|

| | |
|----|--|
| 2. | Latest Market Research Reports or any other source (not older than 2 years) (Yes/No): NA |
| 3. | Government /Industry initiatives/ requirement (Yes/No): NA |
| 4. | Number of Industry validation provided: NA |
| 5. | Estimated nos. of persons to be trained and employed: NA |
| 6. | Evidence of Concurrence/Consultation with Line Ministry/State Departments: NA If "No", why: |

Section 6: Annexure & Supporting Documents Check List

Specify Annexure Name / Supporting document file name

| | | |
|-----|---|---|
| 1. | Annexure: NCrF/NSQF level justification based on NCrF level/NSQF descriptors (<i>Mandatory</i>) | Attached |
| 2. | Annexure: List of tools and equipment relevant for qualification (<i>Mandatory, except in case of online course</i>) | Attached |
| 3. | Annexure: Detailed Assessment Criteria (<i>Mandatory</i>) | Attached |
| 4. | Annexure: Assessment Strategy (<i>Mandatory</i>) | Attached |
| 5. | Annexure: Blended Learning (<i>Mandatory, in case selected Mode of delivery is "Blended Learning"</i>) | NA |
| 6. | Annexure: Multiple Entry-Exit Details (<i>Mandatory, in case qualification has multiple Entry-Exit</i>) | NA |
| 7. | Annexure: Acronym and Glossary (<i>Optional</i>) | Attached |
| 8. | Supporting Document: Model Curriculum (<i>Mandatory – Public view</i>) | Attached |
| 9. | Supporting Document: Career Progression (<i>Mandatory - Public view</i>) | NA |
| 10. | Supporting Document: Occupational Map (<i>Mandatory</i>) | NA |
| 11. | Supporting Document: Assessment SOP (<i>Mandatory</i>) | Attached |
| 12. | Any other document you wish to submit: | Technical Description for Concrete Construction Work |

Annexure 1: 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 | <ul style="list-style-type: none"> Process of carrying out IPS/ Tremix flooring Process of placing, leveling and finishing concrete in various structural elements including repairs | As detailed, the entire process followed by Concrete Construction Worker is carrying out IPS/ Tremix flooring, placing, leveling and finishing concrete in various structural elements including repairs, etc. | 4.5 |

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| | <ul style="list-style-type: none"> 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 construction site | <p>As the work is routine and is repeated multiple times, the work becomes predictable.</p> <p>As the Concrete Construction Worker is 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.</p> | |
| Professional and Technical Skills/ Expertise/ Professional Knowledge | <ul style="list-style-type: none"> Know the standard practices for masonry work Know how to use masonry tools along with some specialized tools Know how to maintain masonry tools and equipment Understand the process of preparing the sub-base Understand different mix proportions/grades of concrete Know the sequence of concrete pouring and placing Know the different admixtures used in concreting Understand the toweling process Know how to use the relevant PPE | <p>The knowledge required for Concrete Construction Worker is factual as it is specific and limited to the knowledge of standard practices for masonry work, use and maintenance of masonry tools along with some specialized tools, sub-base preparation, sequence of concrete pouring and placing, mixing proportion of concrete, admixtures, toweling process, etc.</p> <p>Therefore, their knowledge is applicable to their field of work only</p> | 4.5 |
| Employment Readiness & Entrepreneurship Skills & Mind-set/Professional Skill | <ul style="list-style-type: none"> Inspect the work area before concreting Surface preparation as per the standard practices Mark reference level and flooring thickness Check the type, grade and usability of cement before use Fix the glass, aluminum or brass strip in cement mortar Ensure panels are made as per specified size Install construction joints and expansion joints Ensure curing of the finished floor surface Remove excess water from the top layer of wet concrete Carry out Tremix flooring in the specified panel on RCC floors Carry out curing of finished concrete | <p>As indicated the skill set is required to inspect the work area before concreting, surface preparation as per the standard practices, mark reference level and flooring thickness, check the type, grade and usability of cement before use, fix the glass, aluminum or brass strip in cement mortar, ensure panels are made as per specified size, install construction joints and expansion joints, ensure curing of the finished floor surface, remove excess water from the top layer of wet concrete, carry out Tremix flooring in the specified panel on RCC floors, carry out curing of finished concrete, identify and report different types of defect on the concrete surface, carry out repair work under supervision, etc.</p> | 4.5 |

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| | <ul style="list-style-type: none"> Identify and report different types of defects on the concrete surface Carry out repair work under supervision | | |
| Broad Learning Outcomes/Core Skill | <ul style="list-style-type: none"> Carry out IPS/ Tremix flooring Place, level and finish concrete in various structural elements including repairs Work effectively in a team to deliver desired results at the workplace Plan and organize work to meet expected outcomes Work according to personal health, safety and environmental protocols at construction site | <p>The Concrete Construction Worker is expected to carry out IPS/ Tremix flooring, place, level and finish concrete in various structural elements including repairs, work effectively in a team to deliver desired results at the workplace, plan and organize work to meet expected outcomes, work according to personal health, safety and environmental protocols at construction site</p> | 4.5 |
| Responsibility | <p>The individual in this job role will be responsible for the below-mentioned activities:</p> <ul style="list-style-type: none"> Prepare for IPS/ Tremix flooring Check the line, level and alignment Check the materials used for IPS/ Tremix flooring in manual mixing Check the materials used for IPS/ Tremix flooring in machine mixing Carry out IPS flooring Carry out Tremix/ VDF flooring Prepare for pouring concrete Check the concreting materials Place and compact concrete on PCC and RCC structural elements | <p>A Concrete Construction Worker is responsible for preparing for IPS/ Tremix flooring, checking the line, level and alignment, checking the materials used for IPS/ Tremix flooring in manual mixing, checking the materials used for IPS/ Tremix flooring in machine mixing, carrying out IPS flooring and Tremix/ VDF flooring, preparing for pouring concrete, checking the concreting materials, placing and compacting concrete on PCC and RCC structural elements, screed and level wet concrete, finish and cure concrete, carrying out repair on hardened concrete surfaces.</p> | 4.5 |

| | | |
|--|---|--|
| | <ul style="list-style-type: none">• Screed and level wet concrete• Finish and cure concrete• Carry out concreting in precast segments• Carry out repair on hardened concrete surfaces• Interact and communicate in an effective manner• Support co-workers to execute the project requirements• Practice inclusion• Plan and prepare for work• Organize required resources as per work plan• Complete work as per the plan• Follow safety norms as defined by organization• Adopt healthy & safe work practices• Implement good housekeeping and environment protection process and activities• Follow infection control guidelines as per applicability | |
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NSQCA Approved

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

List of Tools and Equipment

Batch Size: 30 Candidates

| SI N | Tool / Equipment Name | Specification | Quantity |
|------|--|---------------|---------------------------|
| 1 | Work pad (8,5 x 8,5 x 0,18 m) | Numbers | 1 pcs per 2 Competitors |
| 2 | Concrete pump | Numbers | 2 pcs per Skill |
| 3 | Circular Saw Table ;scie sur table | Numbers | 1 pcs per 2 Competitors |
| 4 | Frami Xlife panel 0.90x1.20m | Numbers | 12 pcs per 2 Competitors |
| 5 | Frami Xlife panel 0.60x1.20m | Numbers | 8 pcs per 2 Competitors |
| 6 | Frami Xlife universal panel 0.75x1.50m | Numbers | 5 pcs per 2 Competitors |
| 7 | Frami Xlife panel 0.75x1.20m | Numbers | 4 pcs per 2 Competitors |
| 8 | Frami Xlife panel 0.90x1.50m | Numbers | 12 pcs per 2 Competitors |
| 9 | Frami Xlife panel 0.60x1.50m | Numbers | 8 pcs per 2 Competitors |
| 10 | Frami Xlife panel 0.45x1.20m | Numbers | 6 pcs per 2 Competitors |
| 11 | Frami Xlife panel 0.45x1.50m | Numbers | 6 pcs per 2 Competitors |
| 12 | Frami Xlife universal panel 0.75x1.20m | Numbers | 5 pcs per 2 Competitors |
| 13 | Frami Xlife panel 0.75x1.50m | Numbers | 4 pcs per 2 Competitors |
| 14 | Frami inside corner 1.20m 20cm | Numbers | 6 pcs per 2 Competitors |
| 15 | Frami inside corner 1.50m 20cm | Numbers | 6 pcs per 2 Competitors |
| 16 | Frami outside corner 1.20m | Numbers | 5 pcs per 2 Competitors |
| 17 | Frami outside corner 1.50m | Numbers | 5 pcs per 2 Competitors |
| 18 | Frami hinged inside corner l galv. 1.20m | Numbers | 4 pcs per 2 Competitors |
| 19 | Frami hinged inside corner l galv. 1.50m | Numbers | 4 pcs per 2 Competitors |
| 20 | Frami clamp | Numbers | 187 pcs per 2 Competitors |
| 21 | Frami adjustable clamp | Numbers | 50 pcs per 2 Competitors |
| 22 | Frami universal waling 1.25m | Numbers | 18 pcs per 2 Competitors |
| 23 | Frami wedge clamp | Numbers | 54 pcs per 2 Competitors |
| 24 | Frami universal fixing bolt 5-12cm | Numbers | 73 pcs per 2 Competitors |
| 25 | Super plate 15.0 | Numbers | 193 pcs per 2 Competitors |
| 26 | Frami plywood support 18mm | Numbers | 16 pcs per 2 Competitors |
| 27 | Frami clip | Numbers | 32 pcs per 2 Competitors |
| 28 | Tie rod 15.0mm galvanised 1.00m | Numbers | 12 pcs per 2 Competitors |
| 29 | Panel strut 340 IB | Numbers | 11 pcs per 2 Competitors |
| 30 | Frami bracket 60 | Numbers | 15 pcs per 2 Competitors |
| 31 | Doka express anchor 16x125mm | Numbers | 11 pcs per 2 Competitors |
| 32 | Doka multi-trip transport box 1.20x0.80m | Numbers | 19 pcs per Skill |
| 33 | Frami pallet 1.20m | Numbers | 39 pcs per Skill |
| 34 | Doka stacking pallet 1.55x0.85m | Numbers | 8 pcs per Skill |
| 35 | Doka beam H20 eco N 2.45m | Numbers | 7 pcs per 2 Competitors |
| 36 | Doka beam H20 eco N 2.90m | Numbers | 4 pcs per 2 Competitors |
| 37 | Doka floor prop Eurex 20 top 250 | Numbers | 8 pcs per 2 Competitors |
| 38 | Removable folding tripod top | Numbers | 4 pcs per 2 Competitors |

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|----|---|---------|--------------------------|
| 39 | Handrail clamp S | Numbers | 6 pcs per 2 Competitors |
| 40 | Beam forming support 20 | Numbers | 8 pcs per 2 Competitors |
| 41 | Extension for beam forming support 60cm | Numbers | 8 pcs per 2 Competitors |
| 42 | Hand operated electric bar-cutter | Numbers | 2 pcs per Competitor |
| 43 | 54V XR FLEX VOLT SDS PLUS HAMMER | Numbers | 1 pcs per 2 Competitors |
| 44 | 12V Cordless compact drill kit with a charger | Numbers | 1 pcs per 2 Competitors |
| 45 | Hammer Drill Driver | Numbers | 1 pcs per 2 Competitors |
| 46 | Jigsaw blade set | Numbers | 1 pcs per 2 Competitors |
| 47 | Laser Distance Measurer, Bluetooth | Numbers | 3 pcs per Skill |
| 48 | HGM Folding Rulers (2m) | Numbers | 4 pcs per 2 Competitors |
| 49 | Long Measuring Tape (50m) | Numbers | 3 pcs per Skill |
| 50 | Standard bit for wood (20mm) | Numbers | 1 pcs per 2 Competitors |
| 51 | 4 to 12mm self bit | Numbers | 1 pcs per 2 Competitors |
| 52 | Extendable Spirit Level (215-376cm) | Numbers | 1 pcs per 2 Competitors |
| 53 | Unextendable Stepladder (2.8m) | Numbers | 1 pcs per 2 Competitors |
| 54 | Unextendable Stepladder (1,4 m) | Numbers | 2 pcs per 2 Competitors |
| 55 | Type 96/196-2 Electronic IP 65 (183 cm) | Numbers | 1 pcs per 2 Competitors |
| 56 | Folding sawhorse | Numbers | 1 pcs per 2 Competitors |
| 57 | Cordless Jigsaw | Numbers | 1 pcs per 2 Competitors |
| 58 | Tie rod 15.0mm galvanised 1.00m | Numbers | 18 pcs per Skill |
| 59 | Frami clip | Numbers | 18 pcs per Skill |
| 60 | Frami plywood support 18mm | Numbers | 4 pcs per Skill |
| 61 | Super plate 15.0 | Numbers | 77 pcs per Skill |
| 62 | Frami universal fixing bolt 5-12cm | Numbers | 17 pcs per Skill |
| 63 | Frami wedge clamp | Numbers | 16 pcs per Skill |
| 64 | Frami universal walling 1.25m | Numbers | 16 pcs per Skill |
| 65 | Frami adjustable clamp | Numbers | 50 pcs per Skill |
| 66 | Frami clamp | Numbers | 18 pcs per Skill |
| 67 | Type 96/196-2 Electronic IP 65 (183 cm) | Numbers | 5 pcs per Skill |
| 68 | Unextendable Stepladder (2.8m) | Numbers | 1 pcs per Skill |
| 69 | Unextendable Stepladder (1,4 m) | Numbers | 1 pcs per Skill |
| 70 | Extendable Spirit Level (215-376cm) | Numbers | 5 pcs per Skill |
| 71 | 32 piece screwdriving set | Numbers | 2 pcs per 2 Competitors |
| 72 | Frami universal walling 1.25m | Numbers | 18 pcs per 2 Competitors |
| 73 | Lever Clamp 300Mm | Numbers | 4 pcs per 2 Competitors |
| 74 | Hydraulic trolley/ transpalette | Numbers | 2 pcs per Skill |
| 75 | BM Measuring tape (5 m) | Numbers | 3 pcs per 2 Competitors |
| 76 | Chalk line SG Tracing line | Numbers | 24 pcs per Skill |
| 77 | 9.0 AH battery for SDS+ cordless hammer | Numbers | 1 pcs per 2 Competitors |
| 78 | Charger for 9.0 batteries | Numbers | 1 pcs per 2 Competitors |
| 79 | BM Measuring tape (8 m, 25 mm) | Numbers | 3 pcs per 2 Competitors |
| 80 | Digital electronic angle finder | Numbers | 15 pcs per Skill |
| 81 | Chalk Line Powder (Blue) | Numbers | 1 pcs per 2 Competitors |

| | | | |
|-----|--|---------|--------------------------|
| 82 | Chalk Line Powder (red) | Numbers | 1 pcs per 2 Competitors |
| 83 | Blade for circular saw table | Numbers | 1 pcs per 2 Competitors |
| 84 | Rotation laser | Numbers | 4 pcs per Skill |
| 85 | Levelling rod | Numbers | 4 pcs per Skill |
| 86 | Elevator tripod | Numbers | 4 pcs per Skill |
| 87 | Optical level | Numbers | 1 pcs per Skill |
| 88 | Doka skeleton transport box 1.70x0.80m | Numbers | 3 pcs per Skill |
| 89 | P799BY marking/distancing adhesive - black/yellow - roll of 48 mm x 50 m | Numbers | 40 pcs per Skill |
| 90 | Concrete truck with driver. Day C2 | Numbers | 15 m3 per Skill |
| 91 | Vacuum cleaner dust skill 46 | Numbers | 2 pcs per 2 Competitors |
| 92 | Tie rod 15.0mm galvanised 0.75m | Numbers | 48 pcs per 2 Competitors |
| 93 | Tie rod 15.0mm galvanised 0.75m | Numbers | 32 pcs per Skill |
| 94 | Frami universal walling 1.25m | Numbers | 17 per Skill |
| 95 | Doka beam H20 eco N 3.30m | Numbers | 2 pcs per 2 Competitors |
| 96 | Frami pallet 1.50m | Numbers | 39 pcs per Skill |
| 97 | Doka floor prop Eurex 20 top 250 | Numbers | 2 per Skill |
| 98 | Doka stacking pallet 1.20x0.80m | Numbers | 10 pcs per Skill |
| 99 | Removable folding tripod top | Numbers | 2 per Skill |
| 100 | 4 way head H20 | Numbers | 2 pcs per Skill |
| 101 | Strut head EB | Numbers | 3 pcs per Skill |
| 102 | Strut head EB | Numbers | 22 pcs per 2 Competitors |
| 103 | Supporting head H20 DF | Numbers | 2 pcs per Skill |
| 104 | Supporting head H20 DF | Numbers | 4 pcs per 2 Competitors |
| 105 | Frami universal walling 1.25m | Numbers | 16 pcs per Skill |
| 106 | Plastic tube 200mm (1.0 m long) | Numbers | 1 pcs per 2 Competitors |
| 107 | concrete vibrator | Numbers | 1 pcs per 2 Competitors |
| 108 | Doka formwork sheet | Numbers | 8 pcs per Skill |
| 109 | Dokamatic adapter XP | Numbers | 12 pcs per Skill |
| 110 | Protective grating XP 2.70x1.20m | Numbers | 12 pcs per 2 Competitors |
| 111 | Table Dokamatic | Numbers | 6 pcs per Skill |
| 112 | pied dokamatic | Numbers | 36 pcs per 2 Competitors |
| 113 | Insertion adapter XP | Numbers | 8 pcs per Skill |
| 114 | Handrail post XP | Numbers | 24 pcs per 2 Competitors |
| 115 | table circular saw | Numbers | 1 pcs per 2 Competitors |
| 116 | bolt with nut washer | Numbers | 24 pcs per 2 Competitors |
| 117 | Doka stacking pallet | Numbers | 1 pcs per 2 Competitors |
| 118 | Doka multi-trip transport box 1.20x0.80m | Numbers | 2 pcs per 2 Competitors |
| 119 | Super plate 15.0 | Numbers | 16 pcs per 2 Competitors |
| 120 | Frami tie-holder bracket | Numbers | 16 pcs per 2 Competitors |
| 121 | Tie rod 15.0mm galvanised 1.50m | Numbers | 8 pcs per 2 Competitors |
| 122 | Spring cotter 5mm | Numbers | 12 pcs per 2 Competitors |
| 123 | Connecting pin 10cm | Numbers | 12 pcs per 2 Competitors |

| | | | |
|-----|-------------------------------------|---------|-------------------------|
| 124 | Doka formwork sheet | Numbers | 6 pcs per 2 Competitors |
| 125 | Fork Extensions for Forklift Trucks | Numbers | 1 pcs per Skill |
| 126 | grinder 230mm | Numbers | 2 pcs per Skill |
| 127 | TORX MALE KEY | Numbers | 1 pcs per Skill |
| 128 | Guide rail clamps | Numbers | 1 pcs per 2 Competitors |
| 129 | Guide rail for plunge saw 1.5m | Numbers | 3 pcs per 2 Competitors |
| 130 | Guide rail connection | Numbers | 1 pcs per Skill |
| 131 | Roller base for table saws | Numbers | 1 pcs per 2 Competitors |
| 132 | Airlock connector kit | Numbers | 1 pcs per 2 Competitors |
| 133 | telehandlers with jibs crane | Numbers | 1 pcs per Skill |
| 134 | forklift truck 2.5t | Numbers | 1 pcs per Skill |
| 135 | pallet jack | Numbers | 2 pcs per Skill |
| 136 | Disc cutters | Numbers | 1 pcs per Skill |
| 137 | concrete vibrator 1.20 m | Numbers | 1 pcs per 2 Competitors |
| 138 | concrete vibrator 3m | Numbers | 1 pcs per 2 Competitors |
| 139 | formwork scraper | Numbers | 1 pcs per 2 Competitors |
| 140 | Aluminium shovel | Numbers | 1 pcs per 2 Competitors |
| 141 | straight handle formwork scraper | Numbers | 1 pcs per Skill |
| 142 | round gooseneck shovel | Numbers | 1 pcs per 2 Competitors |
| 143 | Wheelbarrow 90 L | Numbers | 1 pcs per 2 Competitors |
| 144 | Heeled crowbar | Numbers | 2 pcs per Skill |
| 145 | concrete pan 500l | Numbers | 1 pcs per Skill |
| 146 | Mortar trough | Numbers | 2 pcs per Skill |
| 147 | Garden hose kit | Numbers | 1 pcs per Skill |
| 148 | builders bucket | Numbers | 5 pcs per 2 Competitors |
| 149 | heavy duty flexi tub bucket | Numbers | 2 pcs per 2 Competitors |
| 150 | Protective film 5/1000 | Numbers | 1 pcs per 2 Competitors |
| 151 | Rubber waste bin 75L | Numbers | 1 pcs per 2 Competitors |
| 152 | Bolt cutters 10 mm | Numbers | 1 pcs per Skill |
| 153 | coco broom 60 | Numbers | 1 pcs per Skill |
| 154 | Coco broom | Numbers | 1 pcs per 2 Competitors |
| 155 | PVC broom | Numbers | 4 pcs per Skill |
| 156 | Foam squeegee | Numbers | 1 pcs per 2 Competitors |
| 157 | PVC broom handle 140cm | Numbers | 1 pcs per 2 Competitors |
| 158 | Dustpan | Numbers | 4 pcs per Skill |
| 159 | Broom handle 1,2 | Numbers | 1 pcs per 2 Competitors |
| 160 | 4-strand chain sling | Numbers | 1 pcs per Skill |
| 161 | Synthetic Web Slings | Numbers | 8 pcs per Skill |
| 162 | Straight shackle | Numbers | 4 pcs per Skill |
| 163 | Construction site barrier | Numbers | 16 pcs per Skill |
| 164 | Aluminium ruler | Numbers | 1 pcs per 2 Competitors |
| 165 | Formwork positioners 200mm | Numbers | 3 pcs per Skill |
| 166 | Industrial sprayer | Numbers | 1 pcs per 2 Competitors |

| | | | |
|-----|--|---------|--------------------------|
| 167 | Mane brush - polypropylene fibre | Numbers | 4 pcs per Skill |
| 168 | Padlock 60mm | Numbers | 2 pcs per Skill |
| 169 | Adapter extension lead with block of 4 flap sockets, | Numbers | 1 pcs per 2 Competitors |
| 170 | Timber planks (50 x 200 x 4000mm) | Numbers | 40 pcs per 2 Competitors |
| 171 | Timber planks (100 x 100 x 4000 mm) | Numbers | 10 pcs per 2 Competitors |
| 172 | Timber boards (25 x 100 x 4000mm) | Numbers | 10 pcs per 2 Competitors |
| 173 | Industrial wash basin | Numbers | 2 per Skill |
| 174 | Anti-cut gloves (size M) | Numbers | 1 pcs per Competitor |
| 175 | disc for concrete | Numbers | 2 pcs per Skill |
| 176 | Cut-off wheel | Numbers | 3 pcs per Skill |
| 177 | cut-of wheel | Numbers | 4 pcs per Skill |
| 178 | shovel handle 1,30m | Numbers | 1 pcs per 2 Competitors |
| 179 | Translucent polyethylene film under paving | Numbers | 2 pcs per Skill |
| 180 | Adhesive Tape (Red/white 50 mm) | Numbers | 10 pcs per Skill |
| 181 | 17 micron stretch film | Numbers | 6 pcs per Skill |
| 182 | Steel reinforcing bar 8 mm | Numbers | 4 pcs per 2 Competitors |
| 183 | Steel reinforcing bar 10 mm | Numbers | 2 pcs per 2 Competitors |
| 184 | steel reinforcing concrete bar 14 | Numbers | 4 pcs per 2 Competitors |
| 185 | Fork wedges | Numbers | 10 pcs per Skill |
| 186 | White cotton cloths | Numbers | 2 pcs per Skill |
| 187 | Formwork release oil 2 L | Numbers | 1 pcs per 2 Competitors |
| 188 | Formwork release oil 20 L | Numbers | 1 pcs per Skill |
| 189 | Rebar tie wire | Numbers | 3 pcs per Skill |
| 190 | Worksite signalling tape | Numbers | 10 pcs per Skill |
| 191 | Formwork positioners | Numbers | 3 pcs per Skill |
| 192 | Torx screw 4*30 | Numbers | 1 pcs per 2 Competitors |
| 193 | Torx screw 4*40 | Numbers | 1 pcs per 2 Competitors |
| 194 | Torx screw 4*50 | Numbers | 1 pcs per 2 Competitors |
| 195 | Torx screw 4*70 | Numbers | 1 pcs per 2 Competitors |
| 196 | Torx screw 5*90 | Numbers | 1 pcs per 2 Competitors |
| 197 | Torx screw 6*120 | Numbers | 1 pcs per 2 Competitors |
| 198 | Nail 2,2*40 | Numbers | 1 pcs per Skill |
| 199 | Nail 3,5 *70 | Numbers | 1 pcs per 2 Competitors |
| 200 | Nail 2,4*50 | Numbers | 1 pcs per 2 Competitors |
| 201 | Lag screw | Numbers | 1 pcs per 2 Competitors |
| 202 | White wadding spool | Numbers | 2 pcs per Skill |
| 203 | Tiling sponge | Numbers | 6 pcs per Skill |
| 204 | Reinforced bin liners | Numbers | 3 pcs per Skill |
| 205 | Steel chain | Numbers | 1 pcs per Skill |
| 206 | Ear plugs with cord | Numbers | 18 pcs per Skill |
| 207 | Plastic chamfer | Numbers | 5 pcs per 2 Competitors |
| 208 | Marine Plywood 6.5 mm | Numbers | 4 pcs per Skill |

| | | | |
|-----|--|---------|-------------------------|
| 209 | Marine plywood 18 mm | Numbers | 5 pcs per 2 Competitors |
| 210 | CIS Laptop - Type 1 | Numbers | 2 pcs per Skill |
| 211 | TV Stand to mount | Numbers | 1 pcs per Skill |
| 212 | Network filter with, at least, 5 sockets | Numbers | 3 pcs per Skill |
| 213 | Acoustic system with 2 wireless microphones | Numbers | 1 pcs per Skill |
| 214 | Screen and projector | Numbers | 1 pcs per Skill |
| 215 | CIS Laptop - Type 1 | Numbers | 1 pcs per Skill |
| 216 | CIS Laptop - Type 1 | Numbers | 1 pcs per Skill |
| 217 | Color Laser Printer + Scan (A3/A4) | Numbers | 1 pcs per Skill |
| 218 | Mousepad | Numbers | 1 pcs per Skill |
| 219 | Network filter with, at least, 5 sockets | Numbers | 3 pcs per Skill |
| 220 | Screen and projector | Numbers | 1 pcs per Skill |
| 221 | TV Stand to mount | Numbers | 1 pcs per Skill |
| 222 | Network filter with, at least, 5 sockets | Numbers | 1 pcs per Competitor |
| 223 | Network filter with, at least, 5 sockets | Numbers | 10 pcs per Skill |
| 224 | Tablet for marking | Numbers | 10 pcs per Skill |
| 225 | AutoCAD | Numbers | 2 pcs per Skill |
| 226 | Windows OS (11) | Numbers | 4 per Skill |
| 227 | Windows OS (11) | Numbers | 4 per Skill |
| 228 | Chair -Type1 (without wheels) | Numbers | 2 pcs per Skill |
| 229 | Chair -Type1 (without wheels) | Numbers | 1 pcs per Expert |
| 230 | Work bench | Numbers | 1 pcs per 2 Experts |
| 231 | Chair -Type1 (without wheels) | Numbers | 3 pcs per Expert |
| 232 | Work bench | Numbers | 1 pcs per Expert |
| 233 | Refrigerator | Numbers | 1 pcs per Skill |
| 234 | Work bench | Numbers | 3 pcs per Skill |
| 235 | Locker | Numbers | 1 pcs per Skill |
| 236 | Chair -Type1 (without wheels) | Numbers | 3 pcs per Skill |
| 237 | Water cooler | Numbers | 1 pcs per Skill |
| 238 | Sink | Numbers | 2 pcs per Skill |
| 239 | Industrial wash basin | Numbers | 2 per Skill |
| 240 | Work bench | Numbers | 3 per Skill |
| 241 | Fire extinguisher (Powder) | Numbers | 1 pcs per Skill |
| 242 | Fire extinguisher (Powder) | Numbers | 1 pcs per Skill |
| 243 | Fire extinguisher (Powder) | Numbers | 3 pcs per Skill |
| 244 | HSE First Aid Kit | Numbers | 1 pcs per Skill |
| 245 | Anti-cut gloves (size M) | Numbers | 3 pcs per Competitor |
| 246 | Heavy Duty Gloves (Rigger gloves) | Numbers | 1 pcs per 2 Competitors |
| 247 | Eye Wash Bottle | Numbers | 1 pcs per Skill |
| 248 | Protective Glasses (plastic, transparent) - Skill 41 | Numbers | 2 pcs per Competitor |
| 249 | Dust mask | Numbers | 5 pcs per Competitor |
| 250 | Earplugs | Numbers | 5 pcs per Competitor |
| 251 | Hand Sanitizer | Numbers | 1 pcs per 2 Competitors |

| | | | |
|-----|-------------------------------|---------|-------------------------|
| 252 | Anti-cut gloves (size L) | Numbers | 1 pcs per Competitor |
| 253 | HSE First Aid Kit | Numbers | 1 pcs per Skill |
| 254 | Notebook (A5) | Numbers | 1 pcs per Competitor |
| 255 | Pen (Blue) | Numbers | 3 pcs per 2 Competitors |
| 256 | Set of markers | Numbers | 2 pcs per Skill |
| 257 | Hole Punch (2 hole) | Numbers | 1 pcs per Skill |
| 258 | File for A4 paper format | Numbers | 2 pcs per Expert |
| 259 | Highlighter Set | Numbers | 2 pcs per Skill |
| 260 | Paper clips (100 pieces) | Numbers | 2 pcs per Skill |
| 261 | Stapler (20 mm) | Numbers | 2 pcs per Skill |
| 262 | Staple remover | Numbers | 2 pcs per Skill |
| 263 | stapler 6in1 skill 46 | Numbers | 2 pcs per Skill |
| 264 | Scissors SKILL 12 | Numbers | 2 pcs per Skill |
| 265 | Steel ruler (300 mm) | Numbers | 3 pcs per Skill |
| 266 | Rubber Bands | Numbers | 1 pcs per Skill |
| 267 | Notes (3x3 inch, four colors) | Numbers | 2 pcs per Skill |
| 268 | Flip Chart | Numbers | 1 pcs per Skill |
| 269 | Foldback Clips | Numbers | 2 pcs per Skill |
| 270 | Paper for print A4 | Numbers | 2 pcs per Skill |
| 271 | Blu Tack | Numbers | 2 pcs per Skill |
| 272 | Wet Wipes boxes | Numbers | 2 pcs per Skill |
| 273 | Box cutters | Numbers | 2 pcs per Skill |
| 274 | Clipboard | Numbers | 1 per Expert |

NOTE: For regular updates on tool and equipment list (Infrastructure List) for Skill Competition for “**Wall and Floor Tiling**”, kindly refer to the WorldSkills Competition Website: <https://il.worldskills.org/#/events/579/lists/1155/public>

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 3: 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) |
|-------|-------------------|---------------------|-------------|-----------------|------------------|-----------|---------------------------------|
| | | | | | | | |

| | | | | | | | | |
|----|----|----|----|----|----|----|----|----|
| NA |
|----|----|----|----|----|----|----|----|----|

NSQCA Approved

Annexure 4: Training & Employment Details

Training and Employment Projections:

| Year | Total Candidates | | | Women | | | People with Disability | | |
|------|----------------------|------------------------------------|--|----------------------|------------------------------------|----|------------------------|------------------------------------|----|
| | Estimated Training # | Estimated Employment Opportunities | | Estimated Training # | Estimated Employment Opportunities | | Estimated Training # | Estimated Employment Opportunities | |
| NA | NA | NA | | | NA | NA | | | NA |
| NA | NA | NA | | | NA | NA | | | NA |
| NA | NA | NA | | | NA | NA | | | NA |

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 |
| NA | NA | NA | NA | NA | NA | 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:

Content availability for previous versions of qualifications:

Participant Handbook Facilitator Guide Digital Content Qualification Handbook Any Other:

Languages in which Content is available:

Annexure 5: 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 |
|---|--|--------------|-----------------|---------------|------------|
| Work Organization, Management and Communication | <p>Explain health and safety legislation, obligations, and documentation</p> <p>check and ensure the availability of appropriate and usable Personal Protective Equipment (PPE) at the workplace</p> <p>use the appropriate PPE according to the nature of work and ensure other personnel also do the same</p> <p>follow and promote the appropriate measures to ensure hygiene in the workplace, e.g. regular cleaning and sanitization</p> <p>follow the applicable emergency procedures and ensure the personnel also do the same</p> <p>Learn precautions for the safe use of power and cordless tools</p> <p>Apply standards and laws relating to security, safety, and hygiene in plastering and drywall systems</p> <p>establish methods for optimal and economically organized construction site. regarding construction plan and equipment, organization and procedures, material management, staffing and timelines</p> <p>determine the correct calculations and estimates by using principles and methods</p> <p>store plasterboards and related products safely and securely</p> <p>be proactive in own continuous professional development in order to keep abreast of methods of working in the construction industry and changing technologies, for example acoustics, sustainability and environmental impact</p> <p>Work effectively as part of teams</p> <p>Work effectively with other trades</p> <p>Establish and maintain high quality standards and working processes</p> <p>identify problems promptly and manage their resolution</p> <p>select, use and store all materials safely</p> <p>plan work areas to maximize efficiency and maintain the discipline of regular tidying</p> <p>principles and methods for determine the correct calculations and estimates</p> <p>understand technical terminology and symbols</p> <p>visualize and translate customer wishes making recommendations which meet/improve their design and budgetary requirements where qualified to do so</p> <p>Produce a cost and time estimate for customers</p> <p>introduce related trades to support customer requirements</p> <p>work effectively in a team to facilitate efficiency/productivity/quality and cost control</p> <p>recognize the needs of architects and related trades</p> <p>explain the importance of swiftly resolving misunderstandings and conflicting demands</p> | 30 | 70 | | |
| Interpretation of Drawings | <p>Total Marks</p> <p>Prepare site measurement drawings</p> <p>Accurately interpret all plans, elevations, sections and enlarged details</p> <p>Produce basic outline drawings (hand and CAD) including elevations, plans, and sections to full size</p> | 30 | 70 | | |

| | produce accurate complex drawings on wood to make figure on the wall/floor | | | |
|-----------------------------|---|--|----|----|
| | Identify drawing errors or items that require clarification | | | |
| | Determine and check quantities of materials required | | | |
| | Calculate a cost and price for the work | | | |
| | Identify horizontal and vertical key dimensions and all angles | | | |
| | Identify curved work and mortar joint finishes | | | |
| | Interpret all project features and their required construction methods | | | |
| | Establish any features that need special equipment or templates and source these | | | |
| | Recognize specified bonding patterns and obey bonding rules during construction | | | |
| | Provide advice and guidance to other professionals such as architects and quantity surveyors | | | |
| | Keep essential notes on each installation process | | | |
| | Explain complex specialist and technical information about installations to clients and other professionals | | | |
| | Apply mathematic geometry principles to the calculation of angles, areas, perimeters, curves, arcs, volumes, ratios, etc. | | | |
| | Prepare the materials requirements, taking into account increased requirements due to compression, wastage, breakage, etc. | | | |
| | Calculate formwork surfaces and materials requirements | | | |
| Setting out and Measurement | Calculate formwork surfaces and materials requirements for face concrete formwork | | 30 | 70 |
| | Interpret, analyse, and work with construction plans (e.g. design plans, formwork plans, reinforcement plans, detail drawings, etc.) and material and parts lists | | | |
| | Total Marks | | | |
| | Check measurements of the wall/floor conform to the drawing specifications | | | |
| | Produce setting out for templates | | | |
| | Visualize and think through projects, identifying potential challenges early and taking the necessary preventative action | | | |
| | Set out the locations, starting points and lines of projects according to plans and specifications | | | |
| | Set out highly technical designs including brick-on-end, brick-on edge, raked/inclined, curved projecting, recessing brickwork, archways, corbelling, decorative bonding, and battered walling | | | |
| | Accurately interpret the dimensions from drawings and ensure the design is set out within a given tolerance | | | |
| | Check all horizontal and vertical angles | | | |
| | Accurately interpret dimensions from drawings and ensure designs are set out within a given tolerances | | | |
| | Produce any templates/building aids that may be helpful when constructing | | | |
| | Set out datum points of reference for projects | | | |
| | Carry out setting out work using the necessary surveying equipment (pocket rule, tape measure, distance meter, set square, level, etc.) | | | |
| | Measure predetermined structures, joints, and materials for the subsequent face concrete surfaces (anchor holes, shuttering frames, board inserts, distribution and alignment of formwork boards, etc.) | | | |

| | | | | | |
|---|--|--------------------|-----------|-----------|--|
| | Create horizontal levels and measure heights using spirit levels, water level gauges, and optical devices | Total Marks | 30 | 70 | |
| | Total Marks | | | | |
| Construction of Test Project (Concrete Construction Works) | Work manually with materials such as wood, metal, and plastic (for separating, reshaping, connecting) | 30 | 70 | | |
| | Measure, lay out and cut wood and work with it manually and using machinery | | | | |
| | Make simple trestles, working platforms plus auxiliary equipment, set up protective nets and use them in compliance with the relevant regulations | | | | |
| | Make and put together every type of formwork | | | | |
| | Make supports and reinforcements (concrete pressure) | | | | |
| | Make face concrete formwork | | | | |
| | Make slits, apertures, openings, and recesses | | | | |
| | Move anchors as directed | | | | |
| | Make various joints in combination with the appropriate joint sealants (profiles, sealing strips, expansion joint tapes) | | | | |
| | Cut to length, bend, interweave, lay, and anchor structural steel according to bending and reinforcement diagrams and in compliance with reinforcement directives (specifically those concerning bending, radius of curvature, end hooks, brackets, distributors, separators, joints, and connection reinforcements) | | | | |
| | Prevent the following problems through correct construction | | | | |
| | Use scaffolding appropriately and safely and apply health and safety requirements and legislation | | | | |
| | Make simple trestles, working platforms plus auxiliary equipment, set up protective nets and use them in compliance with the relevant regulations | | | | |
| | Cut to length, bend, interweave, lay, and anchor structural steel according to bending and reinforcement diagrams and in compliance with reinforcement directives (specifically those concerning bending, radius of curvature, end hooks, brackets, distributors, separators, joints, and connection reinforcements) | | | | |
| | Prevent the build-up of rust stains on vertical components and of traces of rust caused by reinforcement residues being left on the undersides of horizontal components | | | | |
| | Use scaffolding appropriately and safely and apply health and safety requirements and legislation | | | | |
| | Produce unreinforced and reinforced concrete (mix and transport formula concrete = sitemixed concrete) | | | | |
| | Order ready-mixed concrete for the site and transport it using concrete pumps, crane buckets, or conveyors | | | | |
| | Apply means of separation before concreting, depending on the formwork lining, using high pressure sprays, brushes, cloths or mechanically | | | | |
| | Apply concrete in prepared formwork | | | | |
| | Compress concrete using various compressors | | | | |
| | Process concrete surfaces by smoothing/removing/levelling, using the tools required to do this | | | | |

| | | | | |
|----------------------------|--|------------|------------|----|
| | Carry out after-treatment of concrete using covers, spray, humidification, use of aftertreatment aids, or by leaving fresh concrete in the formwork beyond the stripping times | | | |
| | Prevent incorrect application and compression of concrete | | | |
| | Strip formwork using tools (e.g. formwork bars) | | | |
| | Clean formwork using e.g. water, manual formwork cleaners | | | |
| | Use hazardous cleaners correctly and safely | | | |
| | Care for and maintain system formwork and replace damaged sections | | | |
| | Sort and store all required formwork parts ready for transportation | | | |
| | Total Marks | 30 | 70 | |
| | Inspect equipment, structures, and/or material to identify the nature and causes of errors, defects, or problems | | | |
| | Think critically by using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems | | | |
| Quality Check and Handover | Identify actual and potential problems | | 30 | 70 |
| | Analyse information and evaluate options to choose and use the best solution | | | |
| | Evaluate solutions and optimize results | | | |
| | The need for all work to be presented to meet customer and related trades needs and expectations | | | |
| | The importance of joint finishing in line with the specifications provided | | | |
| | The different techniques of applying different joint finishes | | | |
| | understand the process of marking and assessment criteria of respective trade | | | |
| | respond to the juries on the queries being raised by them | | | |
| | Make and follow through decision | | | |
| | Apply appropriate techniques according to buildings' history and fabrication, whilst maintaining their integrity for both internal and external surfaces | | | |
| | Leave work areas in a suitable condition for inspection and subsequent work | | | |
| | Report positive and negative variances in work processes and results, together with their implications | | | |
| | Organize any waste material so that it can be disposed of or recycled efficiently | | | |
| | Total Marks | 30 | 70 | |
| Grand Total | | 150 | 350 | |

Annexure 6: Assessment Strategy

Assessment Strategy

- For assessment Experts use specific measurement points which are marked on the drawings. Measurement tools are used to take measurements at these points. Each module/task/section is completed on the assigned day so that progressive marking can take place. The marking of modules will start when all Competitors have finished their module. To ensure transparency, each Competitor is provided the same Mark Summary Form as used by the Experts. A master set of marking tools provided by the Competition Organizer is available during familiarization. All measurements are taken using the master set of measuring equipment. As per the Competition Rules a majority vote (50% +1) is needed to:
- Change the Marking Scheme (within limits specified in the Technical Description);
- Change competition sequence or content;
- Agree on a solution for disputes concerning marks awarded etc.
- The assessment information is not provided to the marking team until all Competitors have completed the work that is assessed.
- The panel of Experts will assist the Skill Competition Manager and the Chief Expert to select the Experts for judgement marking.
- The selected Experts possess the suitable industry and competition experience to fulfil the role. • Four Experts are used in the judgement marking team
- 0-3 Scale:
 - 0: performance below industry standard
 - 1: performance meets industry standard
 - 2: performance meets and, in specific respects, exceeds industry standard
 - 3: performance wholly exceeds industry standard and is judged as excellent

For more updates, kindly visit: <https://worldskills.org>

Annexure 7: Acronym and Glossary

Acronym

| Acronym | Description |
|--------------|--|
| AA | Assessment Agency |
| AB | Awarding Body |
| CSDCI | Construction Skill Development Council of India |
| 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 |
| WSC | World Skills Competition |

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 |
|---------------------------|---|

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