











# **Model Curriculum**

QP Name: Brick Mason (Electives: General/Plastering) (Options: VDF Flooring/ Random Rubble works)

QP Code: CON/Q0113

**QP Version: 2.0** 

NSQF Level: 4

**Model Curriculum Version: 2.0** 

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# **Training Parameters**

Sector	Construction			
Sub-Sector	Real Estate and Infrastructure Construction			
Occupation	Masonry			
Country	India			
NSQF Level	4			
Aligned to NCO/ISCO/ISIC Code	NCO-2015/7112.0200			
Minimum Educational Qualification and Experience	11th grade pass or Completed 1st year of 3-year diploma (after 10th) and pursuing regular diploma or 10th grade pass plus 1-year NTC/ NAC or 8th grade pass plus 2-year NTC plus 1 Year NAC/ relevant experience or 10th Grade Pass with 2 years relevant experience or 10th grade pass and pursuing continuous schooling or Previous relevant Qualification of NSQF Level 3.0 with minimum education as 5th Grade pass or Previous relevant Qualification of NSQF Level 3.5			
Pre-Requisite License or Training	NA			
Minimum Job Entry Age	18 Years			
Last Reviewed On	17/11/2022			
Next Review Date	31/03/2025			
NSQC Approval Date	31/03/2022			
QP Version	Version number 2.0			









Model Curriculum Creation Date	17/11/2022
Model Curriculum Valid Up to Date	31/03/2025
Model Curriculum Version	Version number 2.0
Minimum Duration of the Course	450 hrs
Maximum Duration of the Course	690 hrs









# **Program Overview**

This section summarizes the end objectives of the program along with its duration.

#### **Training Outcomes**

At the end of the program, the learner should have acquired the listed knowledge and skills.

- Demonstrate transfer of levels as per drawings/instructions.
- Demonstrate the setting out of the layout as per drawings/instructions.
- Construct load bearing /non load bearing wall, columns and footings using bricks.
- Carry out pointing in brick masonry.
- Perform specialized masonry works such as arches, staircase, manholes and walkways
- Repair and restore brick masonry.
- Lay blocks for construction of wall.
- Repair and restore block masonry.
- Demonstrate effective communication with co-workers, superiors and sub-ordinates across different teams
- Provide support to co-workers, superiors and sub-ordinates within the team and across interfacing teams to ensure effective execution of assigned task.
- Demonstrate practices sensitive to disabilities (physical, mental, intellectual or sensory impairment), cultural diversity and gender neutrality.
- Demonstrate prioritizing of work activities to achieve the desired productivity.
- Demonstrate organizing of resources as per work plan prior to commencement of work.
- Identify various hazards at construction site.
- Use PPE's relevant to masonry task.
- Perform safe waste disposal at construction site.
- Demonstrate the activities to check the spread of infection as per medical/ organizational guidelines.
- Demonstrate brick bat coba water proofing.
- Perform preparatory works for IPS flooring.
- Demonstrate laying of IPS flooring.
- Demonstrate plastering of internal and external masonry and RCC structures.
- Perform checks for line, level and alignment.
- Perform preparatory works for VDF flooring.
- Demonstrate VDF flooring.
- Demonstrate laying of coursed and un-coursed random rubble masonry
- Demonstrate pointing in rubble masonry.
- Demonstrate laying of dry rubble masonry
- Perform checks for line, level and alignment of rubble masonry works.





#### **Compulsory Modules**

The table lists the modules and their duration corresponding to the Compulsory NOS of the QP.

NOS and Module Details	Theory Duration (Hrs)	Practical Duration (Hrs)	On-the-Job Training Duration (Mandatory)	On-the-Job Training Duration (Recommended)	Total Duration (Hrs)
CON/N0143Mark the layout for brick/block work NOS Version No. 2.0 NSQF Level 4	15:00	15:00	(Hrs) 	(Hrs) 	30:00
Bridge Module	08:00	00:00			08:00
Carry out layout marking	07:00	15:00			22:00
CON/N0144 Carry out brick laying work NOS Version No. 2.0 NSQF Level 4	27:00	63:00			90:00
Perform brick laying	27:00	63:00			90:00
CON/N0145 Carry out block laying work NOS Version No. 2.0 NSQF Level 4	18:00	42:00			60:00
Perform block work	18:00	42:00			60:00
CON/N8001 Work effectively in a team to deliver desired results at the workplace NOS Version No. 10.0 NSQF Level 4	09:00	21:00			30:00
Communicate effectively at workplace	09:00	21:00			30:00
CON/N8002 Plan and organize work to meet expected outcomes NOS Version No. 7.0 NSQF Level 4	09:00	21:00			30:00
Prioritise activities and organise resources	09:00	21:00			30:00
CON/N9001 Work according to personal health, safety and environment protocol at construction site NOS Version No.8.0 NSQF Level 4	09:00	21:00			30:00











Follow safety norms as defined by organization, adopt healthy and safe work practices	09:00	21:00	 	30:00
DGT/VSQ/N0102: Employability Skills NOS Version No.1.0 NSQF Level 4	60:00	00:00	 	60:00
Employability Skills	60:00	00:00	 	60:00
Total Duration	147:00	183:00		330:00

#### **Elective Modules**

The table lists the modules and their duration corresponding to the Elective NOS of the QP.

#### **Elective 1: Brick Mason General**

NOS and Module Details	Theory Duration (Hrs)	Practical Duration (Hrs)	On-the-Job Training Duration (Mandatory) (Hrs)	On-the-Job Training Duration (Recommended) (Hrs)	Total Duration (Hrs)
CON/N0146 Carry out brick bat coba waterproofing NOS Version No.2.0 NSQF Level 4	16:30	43:50			60:00
Perform brick bat coba waterproofing	16:30	43:50			60:00
CON/N0147 Carry out IPS flooring NOS Version No.2.0 NSQF Level 4	16:30	43:50			60:00
Perform IPS flooring	16:30	43:50			60:00
Total Duration	33:00	87:00			120:00

#### **Elective 2: Brick Mason Plastering**

NOS and Module Details	Theory Duration (Hrs)	Practical Duration (Hrs)	On-the-Job Training Duration (Mandatory) (Hrs)	On-the-Job Training Duration (Recommended) (Hrs)	Total Duration (Hrs)
CON/N0111 Execute plaster on internal and external surfaces of	33:00	87:00			120:00











masonry and RCC structure NOS Version No.3.0 NSQF Level 4				
Apply plaster on internal and external surfaces	33:00	87:00	 	120:00
Total Duration	33:00	87:00	 	120:00

#### **Optional Modules**

The table lists the modules and their duration corresponding to the Optional NOS of the QP.

#### **Option 1: VDF flooring**

NOS and Module Details	Theory Duration (Hrs)	Practical Duration (Hrs)	On-the-Job Training Duration (Mandatory) (Hrs)	On-the-Job Training Duration (Recommended) (Hrs)	Total Duration (Hrs)
CON/N0148 Carry out VDF Flooring NOS Version No.2.0 NSQF Level 4	18:00	42:00			60:00
Perform VDF Flooring	18:00	42:00			60:00
Total Duration	18:00	42:00			60:00

#### **Option 2: Random rubble works**

NOS and Module Details	Theory Duration (Hrs)	Practical Duration (Hrs)	On-the-Job Training Duration (Mandatory) (Hrs)	On-the-Job Training Duration (Recommended) (Hrs)	Total Duration (Hrs)
CON/N0113 Build structures using random rubble masonry NOS Version No.3.0 NSQF Level 4	18:00	42:00			60:00
Perform Random rubble masonry works	18:00	42:00			60:00
Total Duration	18:00	42:00			60:00





# **Module Details**

# Module 1: Introduction to the job role of Brick Mason (general/ plastering) *Mapped to CON/N0143 v2.0*

#### **Terminal Outcomes:**

- Explain the role and responsibilities of Brick Mason.
- Discuss the career progression for the job role for Brick Mason.

Duration: 08:00	Duration: 00:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
• Describe the role and responsibilities of	
Brick Mason (general/ plastering).	
<ul> <li>Define the personal attributes required in</li> </ul>	
masonry occupation.	
Explain the future possible progression and	
career development options of a Brick	
Mason (general/ plastering).	
Classroom Aids:	
Black/White board, Projector/LED Monitor, Comp	outer system, Trade specific charts and other
teaching aids	
<b>Tools, Equipment and Other Requirements</b>	
N/A	







# Module 2: Carry out layout marking Mapped to CON/N0143 v2.0

#### **Terminal Outcomes:**

- Demonstrate transfer of levels as per drawings/instructions.
- Demonstrate the setting out of the layout as per drawings/instructions.

Duration: 07:00	Duration: 15:00			
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes			
<ul> <li>Interpret the sketches/basic working drawing for brick/block</li> <li>Describe the basic principles of measurement, simple arithmetic's and conversion of units of measurement</li> <li>Explain the process of 3-4-5 method.</li> <li>Explain the use of levelling instruments like spirit level and water levelling and their setting.</li> <li>Explain the process of transferring levels.</li> <li>Explain the use of tools for marking of layout and checks for their serviceability.</li> </ul>	<ul> <li>Performing checks to confirm workability of tools.</li> <li>Demonstrate transfer of levels as per drawings/instructions.</li> <li>Demonstrate the setting out of the layout as per drawings/instructions.</li> <li>Demonstrate marking of the centre lines of a room by 3-4-5 method</li> <li>Demonstrate marking of acute angle, obtuse angle, splayed wall etc.</li> <li>Demonstrate the checking of diagonals of a marked square/rectangle.</li> </ul>			
Classroom Aids:				
Black/White board, Projector/LED Monitor, Comp	outer system, Trade specific charts and other			
teaching aids				
Tools, Equipment and Other Requirements				
Steel trowel, Float wooden/metal), Straight edge (Aluminium), Line and pins, Plumb bob, Line string (line Dori), Try square,, Spirit level, Measuring tape, Steel or wooden scale, Tapered rule, , Red oxide, lime powder, Helmet, Face shield, Safety goggles, Safety shoes, Safety belt, Ear defenders, Particle masks, Overalls Knee pad, Reflective jackets, Pencil				









# Module 3: Perform brick laying Mapped to CON/N0144 v2.0

#### **Terminal Outcome:**

- Construct load bearing /non load bearing wall, columns and footings using bricks. •
- Carry out pointing in brick masonry. •
- Perform specialized masonry works such as arches, staircase, manholes and walkways •
- Repair and restore brick masonry. •











- Explain the various pointing in brick work including Flush pointing, Keyed/grooved pointing, Recessed pointing, Struck pointing etc.
- Discuss the different mortar mixes used for pointing works.
- List the various tools used for pointing and raking
- Explain the various method of curing of masonry structure

#### **Classroom Aids:**

Black/White board, Projector/LED Monitor, Computer system, Trade specific charts and other teaching aids

#### Tools, Equipment and Other Requirements

Hammer, Brick chisel, Stone chisel, Comb chisel, Bolster, Masonry hand saw, Steel trowel, Float wooden/metal), Straight edge (Aluminium), Wood/rubber mallet,, Spade (Phawda), Mortar pan (Ghamela), Corner trowel, Pointer trowel, Tuck pointing trowel, Line and pins, Screed board, Jointers, Steel lever, Plumb bob, Line string (line Dori), Try square,, Spirit level, Measuring tape Steel or wooden scale, Tapered rule, Gauge box, Lifting, appliances (wheel and rope, shackles, sling, belts), Wheel barrows, Wooden sleepers, Rhombus mesh, Mixing plat form (3'x5'), Red oxide, Helmet, Face shield, Safety goggles, Safety shoes, Safety belt, Ear defenders, Particle masks, Overalls Knee pad, Reflective jackets, Pencil











# Module 4: Perform block work Mapped to CON/N0145 v2.0

#### **Terminal Outcome:**

- Lay blocks for construction of wall.
- Repair and restore block masonry.

Duration: 18:00	Duration: 42:00			
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes			
<ul> <li>Interpret sketches, method statements, formats, permits, protocols and checklists for block work.</li> <li>Explain the use of various tools used in block laying.</li> <li>Describe the use of raw material like cement, sand, aggregate, blocks etc., the size and physical attributes.</li> <li>Explain the visual checks required for assessing the quality of blocks.</li> <li>Explain cement mix proportion and its importance.</li> <li>Discuss the water cement ratio.</li> <li>Explain the process of laying and fixing blocks in position with uniform joints.</li> <li>Explain the use of 3-4-5 method for squaring corners.</li> <li>Describe the thin joint masonry.</li> <li>Describe the various techniques for repairing and finishing in block work.</li> </ul>	<ul> <li>Perform visual checks to ascertain quality of blocks.</li> <li>Provide a rough estimate for the quantity of material required for block work.</li> <li>Demonstrate the construction of a block wall as per standard tolerance limit, as per relevant drawing.</li> <li>Demonstrate fixing of blocks using adhesives.</li> <li>Demonstrate checks for maintaining line and level of each course of block wall</li> <li>Demonstrate setting out of 90° corners using builders square or 3-4-5 method.</li> <li>Demonstrate removal of deteriorated elements from old block masonry works and reinstallation of blocks to match adjacent surfaces.</li> <li>Demonstrate filling and raking of repaired block masonry work.</li> </ul>			
Classroom Aids:				
Black/White board, Projector/LED Monitor, Computer system, Trade specific charts and other				
teaching aids				
Tools Equipment and Other Requirements				

Hammer, Brick chisel, Stone chisel, Comb chisel, Bolster, Masonry hand saw, Steel trowel, Float wooden/metal), Straight edge (Aluminium), Wood/rubber mallet,, Spade (Phawda), Mortar pan (Ghamela), Corner trowel, Pointer trowel, Tuck pointing trowel, Line and pins, Screed board, Jointers, Steel lever, Plumb bob, Line string (line Dori), Try square,, Spirit level, Measuring tape Steel or wooden scale, Tapered rule, Gauge box, Lifting, appliances (wheel and rope, shackles, sling, belts), Wheel barrows, Wooden sleepers, Rhombus mesh, Mixing plat form (3'x5'), Red oxide, Helmet, Face shield, Safety goggles, Safety shoes, Safety belt, Ear defenders, Particle masks, Overalls Knee pad, Reflective jackets, Pencil







# Module 5: Communicate effectively at workplace Mapped to CON/N8001, v10.0

#### **Terminal Outcomes:**

- Demonstrate effective communication with co-workers, superiors and sub-ordinates across different teams
- Provide support to co-workers, superiors and sub-ordinates within the team and across interfacing teams to ensure effective execution of assigned task.
- Demonstrate practices sensitive to disabilities (physical, mental, intellectual or sensory impairment), cultural diversity and gender neutrality.

Duration: 09:00	Duration: 21:00		
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes		
<ul> <li>Explain the effects and benefits of timely actions relevant to the task at hand with examples.</li> <li>Explain the importance of teamwork and its effects relevant to the task at hand with examples.</li> <li>Explain the importance of proper and effective communication and its adverse effects in case of failure of proper communication.</li> <li>Discuss about gender and its related concept: gender equality, gender equity (group work)</li> <li>Discuss different types of disabilities (physical, mental, intellectual or sensory impairment).</li> <li>Discuss the activities sensitive to the cultural diversity, disabilities and gender neutrality at the workplace.</li> <li>Discuss the basic rules and regulations related to gender sensitivity, disabilities, and cultural diversity, with their impact on operations of a workplace.</li> <li>Discuss how to take initiative in resolving issues among co-workers in a given situation.</li> <li>Discuss reporting procedure followed at the workplace.</li> </ul>	<ul> <li>Apply effective communication skills while interacting with co-workers, trade seniors and others during the assigned task.</li> <li>Use appropriate writing skills and verbal communication reporting as per commonly applicable organisational norms.</li> <li>Demonstrate teamwork skills during assigned task.</li> <li>Demonstrate acceptable interpersonal transactions with individuals having disabilities (physical, mental, intellectual or sensory impairment) or cultural diversity.</li> <li>Demonstrate the process modifications required to make the workplace free from gender biases.</li> </ul>		
Classroom Aids:			
Black/White board, marker, Projector/LED Monitor, Computer, Trade specific charts, Safety tags, Safety Notice board, registers and other teaching aids			
Tools, Equipment and Other Requirements			
N/A			





# Module 6: Prioritise activities and organise resources Mapped to CON/N8002, v7.0

#### **Terminal Outcomes:**

- Demonstrate prioritizing of work activities to achieve the desired productivity.
- Demonstrate organizing of resources as per work plan prior to commencement of work.

Duration: 09:00	Duration: 21:00	
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes	
<ul> <li>Explain methods to upkeep, store and stack tools, materials used for domain specific works.</li> <li>Explain the process of planning of the given tasks and activities relevant to the trade/job role within defined scope and duration.</li> <li>Explain the procedure adopted for prioritizing an activity and sequencing of activities.</li> <li>Explain the work plan and flow of activities in sequence for the assigned work.</li> <li>Explain basic concept of labour productivity and work productivity.</li> <li>Explain requisition of resources, reporting for requirement of resources orally and in written to concerned authority.</li> <li>Explain how to minimise wastage of resources.</li> <li>Explain the plan for waste collection and disposal after task.</li> </ul>	<ul> <li>Identify the work target and plan activities to achieve the desired productivity.</li> <li>Demonstrate requisition of resource citing an example.</li> <li>Demonstrate the planning for various activities relevant to task as per the scope and schedule.</li> <li>Demonstrate how to organise the required tool, manpower and material resources for the assigned task.</li> <li>Select required quantity of materials, tools or devices for defined work activities.</li> <li>Demonstrate how to prioritize all works/ activities to maximise output.</li> <li>Demonstrate waste collection and disposal as per organisational norms.</li> <li>Demonstrate completion of work within stipulated time and plan.</li> </ul>	
Classroom Aids:		
Black/White board, marker, Projector/LED Monitor, Computer, Trade specific charts, Safety tags,		
Safety Notice board, registers and other teaching aids		

#### Tools, Equipment and Other Requirements

N/A





# Module 7: Follow safety norms as defined by organization, adopt healthy and safe work practices *Mapped to CON/N9001, v8.0*

#### **Terminal Outcome:**

- Identify various hazards at construction site.
- Use PPE's relevant to masonry task.
- Perform safe waste disposal at construction site.
- Demonstrate the activities to check the spread of infection as per medical/ organizational guidelines.

Duration: 09:00	Duration: 21:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul> <li>Explain the types of hazards at the construction sites and identify the hazards specific to the domain related works.</li> <li>Recall the safety control measures and actions to be taken under emergency situation.</li> <li>Explain the classes of fire and types of fire extinguishers.</li> <li>Explain the importance of participation of workers in safety drills.</li> <li>Explain the reporting procedure to the concerned authority in case of emergency situations.</li> <li>Describe the standard procedure for handling, storing and stacking of material, tools, equipment and accessories.</li> <li>Explain different types of waste at construction sites and their disposal method.</li> <li>Explain the purpose and importance of vertigo test at construction site.</li> <li>List out basic medical tests required for working at construction site.</li> <li>Explain the types and benefits of basic ergonomic principles, which should be adopted while carrying out specific task at the construction sites.</li> <li>Explain the importance of housekeeping works.</li> <li>List different types of infectious disease that can spread/ originate at a construction site</li> </ul>	<ul> <li>Demonstrate the operating procedure of the fire extinguishers.</li> <li>Demonstrate use of PPEs as per work requirements.</li> <li>Demonstrate vertigo test.</li> <li>Demonstrate safety techniques to be adopted in case of accidents.</li> <li>Demonstrate safe waste disposal practices followed at construction site.</li> <li>Demonstrate safe housekeeping practices.</li> <li>Demonstrate the practices to maintain personal hygiene, workplace hygiene and site/ workplace sanitization.</li> <li>Demonstrate the methods to clean and disinfect all materials, tools and supplies before and after use.</li> <li>Demonstrate the procedure to report to the concerned authority regarding the outbreak/ hazard of any infectious disease/ pandemic.</li> </ul>











- Explain the methods to check the spread of the infectious disease.
- Describe the symptoms and cure of the various infectious disease.

#### **Classroom Aids:**

Black/White board, marker, Projector/LED Monitor, Computer, Trade specific charts, Safety tags, Safety Notice board, registers and other teaching aids

#### Tools, Equipment and Other Requirements

Leather Hand Gloves, Jump suit, Wire brush, Hand and Leg guard leather, Safety goggles, Nose mask, Ear protection, Fire extinguishers, Sand buckets Flashback arrestors, Welding helmet, Welding glass, Fire Extinguisher, Fire prevention kit, First Aid box, Safety tags, Safety Notice board









## Module 8: Employability Skills (60 Hours)

#### Mapped to DGT/VSQ/N0102- v1.0

#### Duration: 60:00

#### **Key Learning Outcomes**

#### **Introduction to Employability Skills Duration: 1.5 Hours**

After completing this programme, participants will be able to:

- 1. Discuss the Employability Skills required for jobs in various industries
- 2. List different learning and employability related GOI and private portals and their usage

#### **Constitutional values - Citizenship Duration: 1.5 Hours**

- 3. Explain the constitutional values, including civic rights and duties, citizenship, responsibility towards society and personal values and ethics such as honesty, integrity, caring and respecting others that are required to become a responsible citizen
- 4. Show how to practice different environmentally sustainable practices.

#### Becoming a Professional in the 21st Century Duration: 2.5 Hours

- 5. Discuss the importance of relevant 21<sup>st</sup>-century skills.
- 6. Exhibit 21<sup>st</sup>-century skills like Self-Awareness, Behavior Skills, time management, critical and adaptive thinking, problem-solving, creative thinking, social and cultural awareness, emotional awareness, learning to learn etc. in personal or professional life.
- 7. Describe the benefits of continuous learning.

#### **Basic English Skills Duration: 10 Hours**

- 8. Show how to use basic English sentences for everyday conversation in different contexts, in person and over the telephone
- 9. Read and interpret text written in basic English
- 10. Write a short note/paragraph / letter/e -mail using basic English

#### **Career Development & Goal Setting Duration: 2 Hours**

11. Create a career development plan with well-defined short- and long-term goals

#### **Communication Skills Duration: 5 Hours**

- 12. Demonstrate how to communicate effectively using verbal and nonverbal communication etiquette.
- 13. Explain the importance of active listening for effective communication
- 14. Discuss the significance of working collaboratively with others in a team

#### **Diversity & Inclusion Duration: 2.5 Hours**

- 15. Demonstrate how to behave, communicate, and conduct oneself appropriately with all genders and PwD
- 16. Discuss the significance of escalating sexual harassment issues as per POSH act.

#### **Financial and Legal Literacy Duration:5 Hours**

- 17. Outline the importance of selecting the right financial institution, product, and service
- 18. Demonstrate how to carry out offline and online financial transactions, safely and securely
- 19. List the common components of salary and compute income, expenditure, taxes, investments etc.











20. Discuss the legal rights, laws, and aids

#### **Essential Digital Skills Duration: 10 Hours**

- 21. Describe the role of digital technology in today's life
- 22. Demonstrate how to operate digital devices and use the associated applications and features, safely and securely
- 23. Discuss the significance of displaying responsible online behavior while browsing, using various social media platforms, e-mails, etc., safely and securely
- 24. Create sample word documents, excel sheets and presentations using basic features
- 25. utilize virtual collaboration tools to work effectively

#### **Entrepreneurship Duration: 7 Hours**

- 26. Explain the types of entrepreneurship and enterprises
- 27. Discuss how to identify opportunities for potential business, sources of funding and associated financial and legal risks with its mitigation plan
- 28. Describe the 4Ps of Marketing-Product, Price, Place and Promotion and apply them as per requirement
- 29. Create a sample business plan, for the selected business opportunity

#### **Customer Service Duration: 5 Hours**

- 30. Describe the significance of analyzing different types and needs of customers
- 31. Explain the significance of identifying customer needs and responding to them in a professional manner.
- 32. Discuss the significance of maintaining hygiene and dressing appropriately

#### **Getting Ready for apprenticeship & Jobs Duration: 8 Hours**

- 33. Create a professional Curriculum Vitae (CV)
- 34. Use various offline and online job search sources such as employment exchanges, recruitment agencies, and job portals respectively
- 35. Discuss the significance of maintaining hygiene and confidence during an interview
- 36. Perform a mock interview
- **37.** List the steps for searching and registering for apprenticeship opportunities







## **Elective 1**

# Module 9: Perform brick bat coba waterproofing Mapped to CON/N0146, v2.0

#### **Terminal Outcome:**

• Demonstrate brick bat coba water proofing.

Duration: 16:30		Duration: 43:30		
Th	eory – Key Learning Outcomes		Practical – Key Learning Outcomes	
• • • •	Interpret the sketches/basic working drawing for waterproofing works Describe the standard practices for waterproofing works. Explain the use of various tools and equipment used for waterproofing works and their standard specifications. Describe the different surface preparation method prior to waterproofing. Describe the procedure for laying out brick bat coba waterproofing course. Describe the procedure of checking water leakage in waterproofed surface. Describe the procedure for carrying out horizontal and vertical alignment of waterproofed course. Describe the procedure for transferring levels on floor for maintaining desired slope.	•	Demonstrate preparation of surface (filling of non-structural gaps) prior to waterproofing works. Demonstrate marking and transferring of required levels for maintaining slope in waterproofing works. Demonstrate application of cement mortar to the prepared surface using appropriate tools. Demonstrate laying of brick bat coba course for waterproofing works ensuring line, level and alignment. Perform checks for detecting leakage on the waterproofed surface Demonstrate filling of gaps in brick bat coba course using appropriate cement mortar of specified thickness.	
Classroom Aids:				
Bla	ack/White board, Projector/LED Monitor, Com	pute	er system, Trade specific charts and other	

## teaching aids

#### **Tools, Equipment and Other Requirements** Hammer, Brick chisel, Stone chisel, Comb chisel, Steel trow

Hammer, Brick chisel, Stone chisel, Comb chisel, Steel trowel, Float wooden/metal), Straight edge (Aluminium), Wood/rubber mallet, Spade (Phawda), Mortar pan (Ghamela), Corner trowel, Pointer trowel, Tuck pointing trowel, Line and pins, Screed board, Jointers, Steel lever, Plumb bob, Line string (line Dori), Try square,, Spirit level, Measuring tape

Steel or wooden scale, Tapered rule, Gauge box, Lifting, appliances (wheel and rope, shackles, sling, belts), Wheel barrows, Wooden sleepers, Rhombus mesh, Mixing plat form (3'x5'), Red oxide, Helmet, Face shield, Safety goggles, Safety shoes, Safety belt, Ear defenders, Particle masks, Overalls Knee pad, Reflective jackets, Pencil





# Module 10: Perform IPS (Indian Patent Stone) flooring Mapped to CON/N0147, v2.0

#### **Terminal Outcome:**

- Perform preparatory works for IPS flooring.
- Demonstrate laying of IPS flooring.

Dı	iration: 16:30	Duration: 43:30		
Theory – Key Learning Outcomes		Practical – Key Learning Outcomes		
	Describe the standard practices for IPS flooring. Explain the use of tools used in IPS flooring. Explain the procedure for marking reference level and transferring of levels. Explain the process of preparation of sub- base. Explain the various grades of cement used in IPS flooring. Describe the different mix proportions/grades of concrete. Describe the procedure for manual mixing of concrete and nominal mix proportion. List the various admixtures used in concreting. Describe the sequence and procedure of concrete pouring and placing in alternate panels. Explain the provision of cover for reinforcement w.r.t size of reinforcement Describe the different type pf vibrators used for concrete curing and their influence area. Describe the different construction and expansion joints. List the different tools used for grooving/providing expansion joints. Describe the procedure for final trowelling of concrete for desired finish.	<ul> <li>Demonstrate the checks to be carried out for inspection of area prior to concreting</li> <li>Demonstrate checks for formwork and deviation in slope and alignment in PCC.</li> <li>Demonstrate marking and transfer of levels on floor for required thickness using appropriate tools.</li> <li>Demonstrate checks for assessing the quality of materials used in manual and machine mixing of mortar, for IPS flooring works.</li> <li>Demonstrate fixing of glass, aluminium or brass strip in cement mortar with their tops at appropriate level and according to slope.</li> <li>Demonstrate pouring, compaction and finishing of concrete in alternate panels.</li> <li>Demonstrate levelling and curing of the finished floor surface.</li> </ul>		
Cla	assroom Aids:	autor system. Trado sposific shorts and ather		
Black/White board, Projector/LED Monitor, Computer system, Trade specific charts and other				
teaching alds				
Tools, Equipment and Other Requirements				
Hammer, Steel trowel, Float wooden/metal), Straight edge (Aluminium), Wood/rubber mallet,				

Hammer, Steel trowel, Float wooden/metal), Straight edge (Aluminium), Wood/rubber mallet, Spade (Phawda), Mortar pan (Ghamela), Corner trowel, Pointer trowel, Tuck pointing trowel, Line and pins, Screed board, Jointers, Steel lever, Plumb bob, Line string (line Dori), Try square,, Spirit level, Measuring tape,Steel or wooden scale, Tapered rule, Gauge box, Lifting , appliances (wheel and rope, shackles, sling, belts), concrete vibrators, Wheel barrows, Wooden sleepers, Rhombus mesh, Mixing plat form (3'x5'), Red oxide, Helmet, Face shield, Safety goggles, Safety shoes, Safety belt, Ear defenders, Particle masks, Overalls Knee pad, Reflective jackets, Pencil







## **Elective 2**

# Module11: Apply plaster on internal and external surfaces

#### Mapped to CON/N0111, v3.0

**Terminal Outcome:** 

- Demonstrate plastering of internal and external masonry and RCC structures.
- Perform checks for line, level and alignment.

Duration: 33:00	Duration: 87:00		
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes		
<ul> <li>Interpret the sketches/basic working drawing for plastering.</li> <li>Discuss the standard practices for plastering works.</li> <li>Describe the use of tools and equipment used for plastering works and their standard specifications.</li> <li>Describe the process of carrying out layout marking and levelling for plastering works</li> <li>Describe the different materials used for plastering and various ratios of mix proportion used for plastering on internal and external surfaces.</li> <li>Describe the various visual checks performed on materials and surface for plastering works.</li> <li>Explain the different types of plasters such as sand faced plaster, rough cast plaster, pebbled cast plaster, smooth cast plaster etc.</li> <li>Explain the procedures and techniques for plastering internal and external masonry and RCC structures.</li> <li>Explain the procedure for determining the horizontal and vertical alignment using plumb bob.</li> </ul>	<ul> <li>Demonstrate setting out of the layout as per drawing/instruction and transferring of levels as per layout</li> <li>Perform visual checks for sand, cement and surface to be plastered</li> <li>Provide a rough estimate for the quantity of material required for plastering.</li> <li>Demonstrate the checks to ensure the compliance of cement mortar mix to specified proportion.</li> <li>Demonstrate placing of dummy dots, application of cement slurry and cement mix for obtaining desired thickness of plaster using appropriate tools.</li> <li>Demonstrate checks for vertical and horizontal alignment using appropriate tools of plastered surface.</li> <li>Demonstrate setting out of 90° at corners is required.</li> </ul>		

Black/White board, Projector/LED Monitor, Computer system, Trade specific charts and other teaching aids

#### Tools, Equipment and Other Requirements

Hammer, Steel trowel, Float wooden/metal), Straight edge (Aluminium), Wood/rubber mallet,, Spade (Phawda), Mortar pan (Ghamela), Corner trowel, Line and pins, Screed board, Jointers, Steel lever, Plumb bob, Line string (line Dori), Try square,, Spirit level, Measuring tape, Steel or wooden scale, Tapered rule, Gauge box, Lifting, appliances (wheel and rope, shackles, sling, belts), Wheel barrows, Wooden sleepers, Rhombus mesh, Mixing plat form (3'x5'), Red oxide,









Helmet, Face shield, Safety goggles, Safety shoes, Safety belt, Ear defenders, Particle masks, Overalls Knee pad, Reflective jackets, Pencil







# **Option 1**

# Module12: Perform VDF (Vacuum Dewatered Flooring) flooring

#### Mapped to CON/N0148, v2.0

#### **Terminal Outcome:**

- Perform preparatory works for VDF flooring.
- Demonstrate VDF flooring. •

Duration: 18:00	Duration: 42:00			
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes			
<ul> <li>Theory – Key Learning Outcomes</li> <li>Describe the standard practices for VDF flooring.</li> <li>Explain the use of tools used in VDF flooring.</li> <li>Explain the procedure for marking reference level and transferring of levels.</li> <li>Explain the process of preparation of subbase for VDF flooring.</li> <li>Explain the various grades of cement used in VDF flooring.</li> <li>Describe the different mix proportions/grades of concrete for VDF flooring.</li> <li>Describe the procedure for manual mixing of concrete and nominal mix proportion.</li> <li>List the various admixtures used in concreting.</li> <li>Describe the sequence and procedure of concrete pouring and placing in specified panels for VDF flooring.</li> <li>Explain the provision of cover for reinforcement w.r.t size of reinforcement.</li> <li>Describe the different type pf vibrators used for concrete curing and their influence area.</li> <li>Describe the different construction and expansion joints.</li> <li>List the different tools used for grooving/providing expansion joints.</li> <li>Describe the process of excess water removal using vacuum dewatering machine</li> </ul>	<ul> <li>Practical – Key Learning Outcomes</li> <li>Demonstrate the checks to be carried out for inspection of area prior to concreting</li> <li>Demonstrate checks for formwork and deviation in slope and alignment in PCC.</li> <li>Demonstrate marking and transfer of levels on floor for required thickness using appropriate tools.</li> <li>Demonstrate checks for assessing the quality of materials used in manual and machine mixing of mortar, for VDF flooring works.</li> <li>Demonstrate the laying of stone soling/ boulder soling layer.</li> <li>Demonstrate the laying of floor above the stone soling maintain appropriate slope.</li> <li>Demonstrate pouring, compaction and finishing of concrete in specified panels for tremix flooring using tools such as floaters and vacuum dewatering machines.</li> <li>Demonstrate cutting of groves for providing construction joints and expansion joints as per requirement.</li> <li>Demonstrate levelling and curing of the finished floor surface.</li> </ul>			
Classroom Aids:				

Black/White board, Projector/LED Monitor, Computer system, Trade specific charts and other teaching aids

#### **Tools, Equipment and Other Requirements**

Hammer, Steel trowel, Float wooden/metal), Straight edge (Aluminium), Spade (Phawda), Mortar pan (Ghamela), Corner trowel, Line and pins, Screed board, Jointers, Steel lever, Plumb bob, Line string (line Dori), Try square,, Spirit level, Measuring tape, Steel or wooden scale, Tapered rule, Gauge box, Wheel barrows, Wooden sleepers, Rhombus mesh, Mixing plat form (3'x5'), Vacuum







dewatering machine, surface vibrator, Helmet, Face shield, Safety goggles, Safety shoes, Safety belt, Ear defenders, Particle masks, Overalls Knee pad, Reflective jackets, Pencil









# **Option 2**

# Module13: Perform Random rubble masonry works

Mapped to CON/N0113, v3.0

#### **Terminal Outcome:**

- Demonstrate laying of coursed and un-coursed random rubble masonry
- Demonstrate pointing in rubble masonry.
- Demonstrate laying of dry rubble masonry
- Perform checks for line, level and alignment of rubble masonry works.











- Describe the procedure for building of wall in coursed and un-coursed random rubble masonry.
- Explain the importance of bond stones (through stones) and jambs at corners of random rubble masonry wall.
- Describe the procedure for laying course of dry rubble masonry works.
- List the various pointing and raking tools.
- Describe the different mortar mixes used for pointing in random rubble masonry.
- Describe the procedure for preparation of lime/cement mortar and for performing various pointing works on random rubble masonry, namely:
  - flush pointing
  - weathered pointing
  - ribbon pointing

#### **Classroom Aids:**

Black/White board, Projector/LED Monitor, Computer system, Trade specific charts and other teaching aids

#### Tools, Equipment and Other Requirements

Hammer, Brick chisel, Stone chisel, Comb chisel, Steel trowel, Float wooden/metal), Straight edge (Aluminium), Wood/rubber mallet, Spade (Phawda), Mortar pan (Ghamela), Corner trowel, Pointer trowel, Tuck pointing trowel, Line and pins, Screed board, Jointers, Steel lever, Plumb bob, Line string (line Dori), Try square, Spirit level, Measuring tape, Steel or wooden scale, Tapered rule, Gauge box, Lifting, appliances (wheel and rope, shackles, sling, belts), Wheel barrows, Wooden sleepers, Rhombus mesh, Mixing plat form (3'x5'), Red oxide, Helmet, Face shield, Safety goggles, Safety shoes, Safety belt, Ear defenders, Particle masks, Overalls Knee pad, Reflective jackets, Pencil











# Annexure

# **Trainer Requirements**

Trainer Prerequisites						
Minimum Educational	Specialization	Releva Experi	Relevant Industry Experience		ng Experience	Remarks
Qualification		Years	Specialization	Years	Specialization	
Post- Graduation/ Graduation in Engineering	M. Tech in Civil/B. Tech in civil	Two	Civil Engineering	0	Civil Engineering	As a pre- requisite for new entrant, no prior experience in
Diploma	Diploma in Civil	Thre e	Civil Engineering	0	Civil Engineering	training /assessment is
Graduation/ Ex. Army /ITI /12 <sup>th</sup> pass	General B.A./B.Sc./ Graduation certificate from Army/ITI certificate in relevant trade/12 <sup>th</sup> pass	Six	Working experience as Brick mason/ supervisory work experience in masonry occupation	0	Working experience as Brick mason/ supervisory work experience in masonry occupation	mandatory. However, if someone with prior experience in requisite domain joins, experience will be measured in terms of relevant industry experience.

Trainer Certification			
Domain Certification	Platform Certification		
Trainer- 80 % in each NOS of Qualification Pack "Brick Mason CON/Q0113, v2.0" and 80% overall	Trainers - 80% in each NOS of Qualification Pack "Trainer (VET and Skills) MEP/Q2601, v2.0" and 80% overall.		











# **Assessor Requirements**

Assessor Prerequisites						
Minimum Educational	Specialization	Relevant Industry Experience		Training/Assessment Experience		Remarks
Qualification		Years	Specialization	Years	Specialization	
Post- Graduation/ Graduation in Engineering	M. Tech in Civil/B. Tech in civil	Two	Civil Engineering	0	Civil Engineering	As a pre- requisite for new entrant, no prior
Diploma	Diploma in Civil	Five	Civil Engineering	0	Civil Engineering	experience in training
Graduation/ Ex. Army /ITI /12 <sup>th</sup> pass	General B.A./B.Sc./ Graduation certificate from Army/ITI certificate in relevant trade/12 <sup>th</sup> pass	Seve	Working experience as Brick mason/ supervisory work experience in masonry occupation	0	Working experience as Brick mason/ supervisory work experience in masonry occupation	/assessme nt is mandatory. However, if someone with prior experience in requisite domain joins, experience will be measured in terms of relevant industry experience

Assessor Certification				
Domain Certification	Platform Certification			
Assessor- 80 % in each NOS of Qualification Pack "Brick Mason CON/Q0113, v2.0" and 80% overall	Assessors- 80% in each NOS of Qualification Pack "Assessor (VET and Skills) MEP/Q2701, v2.0" and overall 80%.			









### **Assessment strategy**

#### Assessment system Overview

Assessment is done through CSDCI affiliated Assessment Body. Assessors are trained and certified by CSDCI after training of assessor's 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 ratios for Brick mason V1.0 (Elective: General/ Plastering) 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 and
- Where appropriate, any supplementary criteria used to make a judgment on the level of performance.

#### **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 are conducted with proper seating arrangements with enough space between the candidates to prevent copying.

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 Assessment agency/ Assessor will ensure adequate tools and materials are available to conduct the practical test.

The theory and practical assessments will be carried out on same day. If number of candidates are more than 20, more assessors will be organized on same day to complete the assessment. The assessment has to comprise of two components, namely:

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

#### Mode of assessment

1. Demonstration/Practical for Performance /Skill Assessment

- 1. Synoptic multiple-choice question test
- 2. Viva for Knowledge Assessment









**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.

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 Brick mason V1.0 (Elective: General/ Plastering) is summarized below:

Assessment					
Assessment	Formative	Strategies	Weightage	Duration (hours)	
Туре	or				
	Summative				
Knowledge	Summative	MCQ/ Viva	30	1.5	
Skill	Summative	Structured	70	5.5	
		practical tasks			

#### **Assessment Quality Assurance framework**

CSDCI has developed assessment criteria framework for each Qualification pack as per National Occupational Standards (NOS). 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.

#### **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.

Video of the practical session is prepared 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.

#### 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 a week and uploads it on SIP.









# References

# Glossary

Term	Description
Declarative Knowledge	Declarative knowledge refers to facts, concepts and principles that need to be known and/or understood in order to accomplish a task or to solve a problem.
Key Learning Outcome	Key learning outcome is the statement of what a learner needs to know, understand and be able to do in order to achieve the terminal outcomes. A set of key learning outcomes will make up the training outcomes. Training outcome is specified in terms of knowledge, understanding (theory) and skills (practical application).
OJT (M)	On-the-job training (Mandatory); trainees are mandated to complete specified hours of training on site
OJT (R)	On-the-job training (Recommended); trainees are recommended the specified hours of training on site
Procedural Knowledge	Procedural knowledge addresses how to do something, or how to perform a task. It is the ability to work, or produce a tangible work output by applying cognitive, affective or psychomotor skills.
Training Outcome	Training outcome is a statement of what a learner will know, understand and be able to do <b>upon the completion of the training</b> .
Terminal Outcome	Terminal outcome is a statement of what a learner will know, understand and be able to do <b>upon the completion of a module.</b> A set of terminal outcomes help to achieve the training outcome.







# Acronyms and Abbreviations

Term	Description
QP	Qualification Pack
NSQF	National Skills Qualification Framework
NSQC	National Skills Qualification Committee
NOS	National Occupational Standards
CSDCI	Construction Skill development Council of India
MCQ	Multiple Choice Question
EHS	Environment Health and Safety
IPS	Indian Patent Stone
VDF	Vacuum Dewatering Flooring