



Model Curriculum

Assistant Mason

SECTOR: Construction
SUB-SECTOR: Real Estate and Infrastructure Construction
OCCUPATION: MASONRY
REF ID: CON/Q0201, Version 2.0
NSQF LEVEL: 3





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Assistant Mason

CURRICULUM / SYLLABUS

This program is aimed at training candidates for the job of a “Assistant Mason”, in the “Construction” Sector/Industry and aims at building the following key competencies amongst the learner

Program Name	Assistant Mason		
Qualification Pack Name & Reference ID. ID	CON/Q0102, Version 2.0		
Version No.	2.0	Version Update Date	04-03-2020
Pre-requisites to Training	NIL		
Training Outcomes	After completing this programme, participants will be able to: <ul style="list-style-type: none">• Carry out erection and dismantling of temporary scaffold up to 3.6 m height.• Use hand and power tools related to masonry work• Assist in tiling and stone laying works• Assist in concrete masonry works• Carry out anti-termite treatment• Carry out brick soling and Plain Cement Concrete (PCC)flooring• Assist in Brick/ Block• Assist in plastering works• Fix doors and windows frames in room/cubical• Interact and communicate effectively with co-workers, superiors and sub-ordinates across different teams• Follow safety norms as defined by organization, adopt healthy and safe work practices.		

This course encompasses 6 out of 6 National Occupational Standards (NOS) of “Assistant Mason” Qualification Pack issued by “Construction skill sector council of India”.

Compulsory

Sr. No.	Module	Key Learning Outcomes	Equipment Required
1	<p>Introduction to masonry occupation</p> <p>Theory Duration (hh:mm) 08:00</p> <p>Practical Duration (hh:mm) 00:00</p> <p>Corresponding NOS Code Bridge Module</p>	<ul style="list-style-type: none"> Describe the role and responsibilities of an assistant mason. Apply the basic knowledge of units, measurement and arithmetic calculation. Recall the basic terms used in masonry works. Describe the various types of masonry works. Discuss future possible progression and career options for assistant mason 	
2	<p>Erect and dismantle temporary scaffold up to 3.6-meter height</p> <p>Theory Duration (hh:mm) 12:00</p> <p>Practical Duration (hh:mm) 28:00</p> <p>Corresponding NOS Code CON/N0101</p>	<ul style="list-style-type: none"> Explain scaffolding and its purpose List the common materials and tools used for erection of scaffolding (pipe, cup lock (vertical and ledgers), H-frames, bamboo and balli List the functions of different hand tools like hammer, spanner, pulleys, hooks, ropes, etc., used for erection/ dismantling of scaffolds List the visual checks to be carried out on the scaffolding components to ascertain their usability Identify different components of a temporary scaffolding such as base, toe board, guard rails, platform, walkways, ladder and so on Explain the functions of materials, components and accessories used in scaffolding Demonstrate preparation of scaffolding base Explain the methods adopted for the erection of the scaffold to ensure its safety Demonstrate erection of a scaffold(up to 3.6 m height)using pipes and couplers/ cup lock system/ H frame using appropriate hand tools Demonstrate the various checks to be done while erecting scaffolds such as 	<ul style="list-style-type: none"> Hammer Spanner (set) Wrench Pulley Rope Nuts and bolts Measuring tape Spirit level Plumb-bob Mason’s line Helmet Safety shoes Safety belt Cotton hand gloves Goggles Reflective jackets

Sr. No.	Module	Key Learning Outcomes	Equipment Required
		<ul style="list-style-type: none"> • verticality check, stability check and rigidity check. • Explain the sequence and standard procedure of dismantling and stacking of scaffold • Demonstrate the dismantling and stacking of scaffold • Demonstrate the stacking of material, components, tools and accessories during erection and after dismantling. 	
3	<p>Handle and use hand and power tools related to masonry work</p> <p>Theory Duration (hh:mm) 16:00</p> <p>Practical Duration (hh:mm) 38:00</p> <p>Corresponding NOS Code CON/N0105</p>	<ul style="list-style-type: none"> • Identify various masonry related hand tools, power tools and equipment • Demonstrate the use of hand tools, power tools and equipment for the masonry work • Describe the process adopted for care and maintenance of hand and power tools used in masonry work • Demonstrate the checks required for the serviceability and safety of the tools • Explain the procedure for transferring of level • Use basic levelling devices such as water level, spirit level, auto level etc. to transfer level. • Enumerate the basic terminologies used in masonry works • Explain about the indent procedure. 	<ul style="list-style-type: none"> • Trowel • Mason's hammer • String line • Jointers • Mallets • Wedges • Screeds • Floats • Bolster chisel • Spade • Measuring tape • Scale • Steel square • Power wet saws • Electric drills • Tile cutters • Vibrators • Grinders • Concrete mixer • Water level tube • Spirit level • Plumb bob • Safety helmets • Hand gloves • Safety shoes • Safety harness • Nose mask
4	<p>Assist in the tiling and stone laying works</p> <p>Theory Duration (hh:mm) 8:00</p> <p>Practical Duration (hh:mm) 24:00</p> <p>Corresponding NOS Code CON/N0106</p>	<ul style="list-style-type: none"> • Describe the standard practices involved in tiling and stone laying works • Determine the location and orientation of tiling and stone laying works by interpreting the sketches. • Compute dimensions by interpreting hand sketches and simple drawing. • Use basic tools and equipment related to tiling and stone laying works applying safe work practices. • Differentiate between different types of tiles based on their physical properties and application 	<ul style="list-style-type: none"> • Trowel • Mason's hammer • String line • Jointers • Mallets • Wedges • Screeds • Floats • Bolster chisel • Spade • Measuring tape • Scale • Steel square • Power wet saws

Sr. No.	Module	Key Learning Outcomes	Equipment Required
		<ul style="list-style-type: none"> • Demonstrate transferring, handling and proper stacking of tiles, granite and stones • Demonstrate the checks of surface preparation prior to laying tiles/stones. • Demonstrate preparation of bed mortar, cement slurry and cement paste as per standard method • Demonstrate marking of dummy dots to the required thickness • Demonstrate the dry tile arrangement using spacers as per the design plan 	<ul style="list-style-type: none"> • Electric drills • Tile cutters • Grinders • Water level tube • Spirit level • Plumb bob • Safety helmets • Hand gloves • Safety shoes • Safety harness • Nose mask
5	<p>Assist in concreting works</p> <p>Theory Duration (hh:mm) 8:00</p> <p>Practical Duration (hh:mm) 24:00</p> <p>Corresponding NOS Code CON/N0106</p>	<ul style="list-style-type: none"> • Describe the standard practices involved in concreting works • Determine the location and orientation of concreting works by interpreting the sketches. • Compute dimensions by interpreting hand sketches and simple drawing. • Use basic tools and equipment related to concreting works applying safe work practices. • Describe the checks prior to and post concreting • Demonstrate the checks of surface preparation prior to concreting works • State the basic properties of concrete including weight, slump, etc. and its batching according to the specified grade • Explain the technique of pouring of concrete in various structures • Demonstrate the pouring and finishing of concrete in the form of layers • Discuss the procedure for compaction of concrete • Demonstrate the compaction of concrete using vibrator or other appropriate tools • Explain about the procedure adopted for concrete curing • Demonstrate curing of finished concrete surface 	<ul style="list-style-type: none"> • Trowel • Mason's hammer • String line • Mallets • Wedges • Screeds • Floats • Bolster chisel • Spade • Measuring tape • Scale • Steel square • Vibrators • Concrete mixer • Water level tube • Spirit level • Plumb bob • Safety helmets • Hand gloves • Safety shoes • Safety harness • Nose mask
6	<p>Carry out anti-termite treatment</p> <p>Theory Duration</p>	<ul style="list-style-type: none"> • Explain basic anti-termite treatment used at site • Demonstrate the procedure of anti-termite treatment 	<ul style="list-style-type: none"> • Trowel • Mason's hammer • String line • Safety helmets

Sr. No.	Module	Key Learning Outcomes	Equipment Required
	(hh:mm) 4:00 Practical Duration (hh:mm) 8:00 Corresponding NOS Code CON/N0106		<ul style="list-style-type: none"> • Hand gloves • Safety shoes • Safety harness • Nose mask
7	Carry out brick soling and plain cement concrete(PCC) flooring Theory Duration (hh:mm) 4:00 Practical Duration (hh:mm) 8:00 Corresponding NOS Code CON/N0106	<ul style="list-style-type: none"> • Describe the standard practices involved in brick soling and PCC flooring • Determine the location and orientation of PCC flooring works by interpreting the sketches. • Compute dimensions by interpreting hand sketches and simple drawing. • Explain the process of brick soling and PCC flooring • Demonstrate the pouring and finishing of concrete in in case of PCC flooring • Demonstrate the compaction of concrete using vibrator or other appropriate tools • Demonstrate brick soling works 	<ul style="list-style-type: none"> • Trowel • Mason's hammer • String line • Wedges • Screeds • Floats • Spade • Measuring tape • Scale • Steel square • Vibrators • Concrete mixer • Water level tube • Spirit level • Plumb bob • Safety helmets • Hand gloves • Safety shoes • Safety harness • Nose mask
8	Assist in brick/ block work Theory Duration (hh:mm) 12:00 Practical Duration (hh:mm) 36:00 Corresponding NOS Code CON/N0107	<ul style="list-style-type: none"> • Use different types of masonry tools and equipment applying safe work practices • Determine the location and orientation of brick/block works by interpreting the sketches. • Compute dimensions by interpreting hand sketches and simple drawing • Use basic levelling devices such as water level, spirit level etc. for transferring level • Explain different types of bonds in brickwork. • Describe the various types of mortar mixes required for block/ brick work • Discuss the various checks involved in brick/block work • Explain the process of setting out of the layout as per the given sketches 	<ul style="list-style-type: none"> • Trowel • Mason's hammer • String line • Jointers • Wedges • Screeds • Floats • Spade • Steel scale • Measuring tape • Spirit level • Steel square • Concrete mixer • Water level tube • Spirit level • Plumb bob • Safety helmets • Hand gloves • Safety shoes • Safety harness • Nose mask

Sr. No.	Module	Key Learning Outcomes	Equipment Required
		<ul style="list-style-type: none"> • Demonstrate preparation of cement mortar in required mix ratio • Demonstrate fixing brick in position as per alignment and prescribed bond pattern (such as English and Flemish bond) 	
9	<p>Assist in plastering work</p> <p>Theory Duration (hh:mm) 04:00</p> <p>Practical Duration (hh:mm) 16:00</p> <p>Corresponding NOS Code CON/N0107</p>	<ul style="list-style-type: none"> • Identify different types of plastering tools and equipment • Interpret hand sketches and simple drawings for obtaining required dimensions and plastering specification • Demonstrate transferring of levels using levelling devices such as water level, spirit level • Describe the various types of mortar mix required for plastering work • Demonstrate preparation of cement mortar for plastering works • Demonstrate marking of dummy dots for plastering works • Demonstrate various checks such as plumb check, surface finish, thickness, corners and squareness in plastering work 	<ul style="list-style-type: none"> • Trowel • Mason's hammer • String line • Jointers • Wedges • Spade • Steel scale • Measuring tape • Spirit level • Steel square • Concrete mixer • Water level tube • Spirit level • Plumb bob • Safety helmets • Hand gloves • Safety shoes • Safety harness • Nose mask
10	<p>Fix door & window frames in room/cubical</p> <p>Theory Duration (hh:mm) 08:00</p> <p>Practical Duration (hh:mm) 12:00</p> <p>Corresponding NOS Code CON/N0107</p>	<ul style="list-style-type: none"> • Determine the location and orientation of doors and windows by interpreting the sketches. • Compute dimensions by interpreting hand sketches and simple drawing • Describe the standard size of door/window used in building construction • Explain about various materials and fittings used in door and window fixing • Demonstrate fixing of door and window frames using appropriate levelling tools and supports 	<ul style="list-style-type: none"> • Trowel • String line • Wedges • Spade • Steel scale • Measuring tape • Spirit level • Steel square • Electric drills • Water level tube • Spirit level • Plumb bob • Safety helmets • Hand gloves • Safety shoes • Safety harness • Nose mask
11	<p>Work effectively in a team to deliver desired results at the workplace</p> <p>Theory Duration (hh:mm) 08:00</p>	<ul style="list-style-type: none"> • Demonstrate effective communication skills while interacting with co-workers, trade seniors and others during the assigned task. • Interpret work sketches, formats, permits, protocols, checklists and other work-related requirements 	

Sr. No.	Module	Key Learning Outcomes	Equipment Required
	<p>Practical Duration (hh:mm) 16:00</p> <p>Corresponding NOS Code CON/N8001</p>	<p>which are to be conveyed to other team members</p> <ul style="list-style-type: none"> • Demonstrate effective reporting to seniors as per applicable organisational norms. • Explain effects and benefits of timely actions relevant to masonry works with examples • Explain importance of team work and its effects relevant to masonry works with examples • Demonstrate team work skills during assigned task. 	
12	<p>Work according to personal health, safety and environment protocol at construction site</p> <p>Theory Duration (hh:mm) 16:00</p> <p>Practical Duration (hh:mm) 32:00</p> <p>Corresponding NOS Code CON/N9001</p>	<ul style="list-style-type: none"> • Explain the types of hazards at the construction sites • Identify the hazards specific to the masonry works • Recall the safety control measures and actions to be taken under emergency situations • Explain the classes of fire and types of fire extinguishers • Demonstrate the operation of fire extinguisher • Demonstrate different methods involved in providing first aid to the affected person. • Explain the importance of worker participation in safety/mock drills • Demonstrate the use of all Personal Protective Equipment (PPE) like helmet, safety shoe, safety belt, safe jackets and other safety equipment relevant to masonry works requirement • Explain the reporting procedures adopted during emergency situations • Describe the standard procedure for handling, storing and stacking of material, tools, equipment and accessories • Explain different types of wastes produced at a construction site including their disposal method • Explain the purpose and importance of vertigo test at construction site • Demonstrate vertigo test • List out basic medical tests required for working at construction site • Explain the types of ergonomic principles adopted while carrying out specific task at the construction 	<ul style="list-style-type: none"> • safety helmet • reflecting jackets • Safety Belts • safety shoes • gum shoes • hand gloves • fire extinguisher • safety boards • nose mask • ear plug • first aid box

Sr. No.	Module	Key Learning Outcomes	Equipment Required
		<ul style="list-style-type: none"> • Explain the benefits of basic ergonomic principles used at construction sites. • Explain the importance of housekeeping works • Demonstrate housekeeping practice followed after masonry works 	
	<p>Total Duration: 350 Hrs.</p> <p>Theory Duration: 108 Hrs.</p> <p>Practical Duration: 242 Hrs.</p>	<p>Unique Equipment Required: Tool box with lock and key, Measuring tape/rule, Masons line, Plumb bob, Try Square, Trowel, Mason’s hammer, String line, Steel square, Jointers, Measurement tape, Mallets, Wedges, Screeds, Floats, Bolster chisel, Power wet saws, Electric drills, Tile cutters, Vibrators, Grinders, Concrete mixer, Safety Helmets, Face shield, Overalls, Knee pads, Safety shoes, Safety belts, Safety harness, Safety Gloves, Safety goggles, Particle masks, Ear Plugs, Reflective jackets, Fire Extinguisher, Fire prevention kit, First Aid box,</p> <p>Classroom aids (for 30 students): Black/White board, marker, Projector/LED Monitor, Computer, Trade specific charts, Safety tags, Safety Notice board registers and other teaching aids</p>	

Grand Total Course Duration: **350 Hours, 0 Minutes**

(This syllabus/ curriculum has been approved by Construction Skill Development Council of India)



Trainer Prerequisites for Job role: “Assistant Mason” mapped to Qualification Pack: “CON/Q0102, Version 2.0”

Sr. No.	Area	Details
1	Description	To deliver accredited training service, mapping to the curriculum detailed above, in accordance with the Qualification Pack “ <u>CON/Q0101, Version 2.0</u> ”.
2	Personal Attributes	Aptitude for conducting training, and pre/ post work to ensure competent, employable candidates at the end of the training. Strong communication skills, interpersonal skills, ability to work as part of a team; a passion for quality and for developing others; well-organised and focused, eager to learn and keep oneself updated with the latest in the mentioned field
3	Minimum Educational Qualifications	ITI/12th
4a	Domain Certification	Certified for the job role “Assistant Mason” mapped to QP:“ <u>CON/Q0102 Version 2.0</u> ” Minimum accepted score is 80%
4b	Platform Certification	Certified for the job role “Trainer” mapped to QP:“ <u>MEP/Q2601</u> ” Minimum accepted score is 80%
5	Experience	i. Technical Degree holder with minimum three years of Field experience and preferably two years of teaching experience or, ii. In case of a Diploma Holder five years of field experience and preferably two years of teaching experience or, iii. In case of ITI/12 th pass minimum eight years of field experience and preferably two years of teaching Experience.

Note: For the Assessment Criteria please refer to the QP PDF