



Model Curriculum

1. Mason General

SECTOR: Construction
SUB-SECTOR: Real Estate and Infrastructure Construction
OCCUPATION: MASONRY
REF ID: CON/Q0103, V1.0
NSQF LEVEL: 4





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Mason General

CURRICULUM / SYLLABUS

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

Program Name	Mason General		
Qualification Pack Name & Reference ID. ID	CON/Q0103, v1.0		
Version No.	1.0	Version Update Date	30-12-2015
Pre-requisites to Training	Preferably 5th Standard		
Training Outcomes	<p>After completing this programme, participants will be able to:</p> <ul style="list-style-type: none">• Gain insight into Mason General job role and its career progression: - General introduction to job role, role of a Mason General in construction industry along with the future possible career development provisions.• Construct masonry structure using Brick/block :- Select and use tools and equipment for constructing masonry structure using brick/block• Execute plaster on internal & external surfaces of masonry & RCC structure:-Select & use tools and equipment for carrying out plastering on internal and external surfaces of masonry & RCC structures• Carry out waterproofing works for structures using cementitious materials: - Select and use tools, materials and equipment for carrying out brush bond waterproofing and brick bat coba course for waterproofing works.• Build structures using random rubble masonry :- Select and use tools, materials and equipment for construction of structure using random rubble masonry• Carry out IPS / Tremix flooring :- Select and use tools, materials and equipment for construction of IPS/Tremix flooring works• Work effectively in a team to deliver desired results at the workplace :- Organised working procedure within a team at site• Plan and organize work to meet expected outcomes:- Prioritizing activities and organising resources to meet desired outcome• Work according to personal health, safety and environment protocol at construction site: - Importance of Health & Safety aspects & measures to be followed while working.		

This course encompasses 8 out of 8 National Occupational Standards (NOS) of “Mason General” Qualification Pack issued by “Construction”.

Sr. No.	Module	Key Learning Outcomes	Equipment Required
1	<p>Introduction</p> <p>Theory Duration (hh:mm) 08:00</p> <p>Practical Duration (hh:mm) 00:00</p>	<ul style="list-style-type: none"> • Role description/ functions of the job role • Expected personal attributes from the job role • Brief description about course content, mode of learning and duration of course • Future possible progression and career development provisions on completion of the course 	<ol style="list-style-type: none"> 1. Classroom having seating requirement for 30 people. 2. Projector 3. Blackboard
2	<p>Construct masonry structures using brick / block</p> <p>Theory Duration (hh:mm) 18:00</p> <p>Practical Duration (hh:mm) 70:00</p> <p>Corresponding NOS Code CON/N0110</p>	<p>Theory:-</p> <ul style="list-style-type: none"> • Basic principles of measurement ,simple arithmetic's and conversion of units of measurement • Sketches for brick/block work • Reading and interpretation of method statements, formats, permits, protocols, checklists for works • standard specification of all masonry tools and equipment, their care and maintenance • how and carry out layout and marking for brick/block work • how to select and use tools such as measuring tape, trowels, floats, brushes, screed boards, straightedge, concrete mixer, mortar boards and stands, shovels, wheelbarrows, hawks, joint rules, mason's square, buckets, power leads, spade, volume box, water measuring jug etc. for masonry works • Type of raw material like cement, sand, aggregate, bricks/blocks; the size and physical attributes of bricks/blocks • Visual checks performed for assessing the brick • Basic levelling instruments like spirit level and water levelling, its setting and use • Determining vertical and horizontal alignment using thread line, spirit level, plum bob etc. • 3-4-5 method for squaring corners • Method of carrying out checks for preparatory works like surface preparation • techniques for cutting, chiselling of bricks as per closure using appropriate tools • Knowledge of cement mix proportion and its importance • Basic knowledge of water cement ratio 	<ol style="list-style-type: none"> 1. Hammer, 2. Brick chisel 3. Stone chisel 4. Comb chisel 5. Bolster 6. Masonry hand saw 7. Steel trowel, Float wooden/metal) 8. Straight edge (Aluminium) 9. Wood/rubber mallet, 10. Spade (Phawda) 11. Mortar pan (Ghamela) 12. Corner trowel 13. Pointer trowel 14. Tuck pointing trowel 15. Line and pins 16. Screed board 17. Jointers 18. Steel lever 19. Plumb bob 20. Line string (line Dori) 21. Try square, 22. Spirit level 23. Measuring tape 24. Steel or wooden scale 25. Tapered rule 26. Gauge box 27. Lifting , appliances (wheel and rope, shackles, sling, belts) 28. Wheel barrows 29. Wooden sleepers 30. Rhombus mesh

Sr. No.	Module	Key Learning Outcomes	Equipment Required
		<ul style="list-style-type: none"> • Knowledge of English, Flemish, stretcher and header bond • Process of laying and fixing brick/blocks in position with uniform joints • Various adhesives used in block work • Marking and layout of tread and risers for staircase • Laying and fixing of bricks in staircase • Different components of arch and its terminology • Laying and fixing bricks in arches providing key stones and levelling and aligning appropriately • Importance of providing proper joint spacing and gauging in arches • Various techniques for repairing and finishing in brick/block work • Process of pointing in brick work <ul style="list-style-type: none"> ❖ Flush pointing ❖ Keyed/grooved pointing ❖ Recessed pointing ❖ Struck pointing • Different mortar mix used for pointing • Various tools used for pointing and raking • Various method of curing of masonry structure Demonstration/ Practical :- • Reading and interpreting the sketches/basic working drawing for brick/block • Selecting tools and performing checks to confirm their workability • Setting out the layout as per drawing/instruction and transferring levels as per layout • Performing visual checks for brick/block, cement, aggregate • Estimate the quantity of material required for work. • Demonstrate the breaking of breaks to required size and shape. • Build brick/block wall as per standards tolerance as per relevant drawing. • Demonstrate checks for maintaining line and level of each course of brick/block wall • Demonstrate setting out of 90° corners using builders square or 3-4-5 method. • Demonstrate raking and cleaning of joints as specified prior to drying of bonding mortar • Demonstrate preparation of lime/cement mortar for pointing as per specification 	<ul style="list-style-type: none"> 31. Mixing plat form (3'x5') 32. Red oxide 33. Helmet 34. Face shield 35. Safety goggles 36. Safety shoes 37. Safety belt 38. Ear defenders 39. Particle masks 40. Overalls Knee pad 41. Reflective jackets 42. Pencil

Sr. No.	Module	Key Learning Outcomes	Equipment Required
		<ul style="list-style-type: none"> • Demonstrate filling of joints with mortar to obtain specified type of pointing using appropriate tools. • Demonstrate set out of tread and riser for staircase • Demonstrate building of staircase maintaining bond, alignment and plumb. • Demonstrate building of manhole as per required drawing as per specifications • Demonstrate fixing of paver blocks • Demonstrate installations and fixing of arch elements for building arches. • Demonstrate building of arches, cutting creepers around corners and filling of joints for arches. • Demonstrate removal of deteriorated elements from masonry works using appropriate tools. • Demonstrate reinstallation of bricks to match adjacent surfaces. • Demonstrate proper filling and raking of repaired work and it's bonding and matching with adjacent surfaces. 	
3	<p>Execute plaster on internal & external surfaces of masonry & RCC structure</p> <p>Theory Duration (hh:mm) 13:00</p> <p>Practical Duration (hh:mm) 51:00</p> <p>Corresponding NOS Code CON/N0111</p>	<p>Theory:</p> <ul style="list-style-type: none"> • Standard practices for plastering works. • Drawings /sketches relevant to plastering works • Tools and equipment used for plastering works and their standard specifications. • Basic levelling tools used in masonry works • Process of carrying out layout marking and levelling for plastering works • Different material used for plastering and various ratios of mix proportion used for plastering on internal and external surfaces. • Process of performing various visual checks on materials and surface for plastering • Gradation of sand for internal plastering works • Different type of plasters such as sand faced plaster, rough cast plaster pebbled cast plaster, smooth cast plaster • Procedures and techniques for plastering internal and external masonry and RCC structures • Procedure for determining the horizontal and vertical alignment using plumb bob. <p>Demonstration/ Practical :-</p>	<ol style="list-style-type: none"> 1. Hammer, 2. Brick chisel 3. Stone chisel 4. Comb chisel 5. Bolster 6. Masonry hand saw 7. Steel trowel, Float wooden/metal) 8. Straight edge (Aluminium) 9. Wood/rubber mallet, 10. Spade (Phawda) 11. Mortar pan (Ghamela) 12. Corner trowel 13. Pointer trowel 14. Tuck pointing trowel 15. Line and pins 16. Screed board 17. Jointers 18. Steel lever 19. Plumb bob 20. Line string (line Dori) 21. Try square, 22. Spirit level 23. Measuring tape

Sr. No.	Module	Key Learning Outcomes	Equipment Required
		<ul style="list-style-type: none"> • Reading and interpreting the sketches/basic working drawing for plastering • Selecting tools and performing checks to confirm their workability • Setting out the layout as per drawing/instruction and transferring levels as per layout • Performing visual checks for sand, cement and surface to be plastered • Estimate the quantity of material required for work. • Checking and ensuring that the cement mortar mix to confirm to specified proportion. • Demonstrate placing of dummy dots (level pads) for a levelled plastering work. • Demonstrate application of cement slurry and cement mix for obtaining desired thickness of plaster using appropriate tools. • Demonstrate checks for vertical and horizontal alignment using appropriate tools of plastered surface. • Demonstrate setting out of 90° at corners is required. • Demonstrate maintaining slope/fall in case of floor plastering. • Store tools properly after use 	<ul style="list-style-type: none"> 24. Steel or wooden scale 25. Tapered rule 26. Gauge box 27. Scaffold set (Including all components) 28. Lifting , appliances (wheel and rope, shackles, sling, belts) 29. Wheel barrows 30. Wooden sleepers 31. Rhombus mesh 32. Mixing plat form (3'x5') 33. Red oxide 34. Helmet 35. Face shield 36. Safety goggles 37. Safety shoes 38. Safety belt 39. Ear defenders 40. Particle masks 41. Overalls Knee pad 42. Reflective jackets 43. Pencil
4	<p>Carry out waterproofing works for structures using cementitious materials</p> <p>Theory Duration (hh:mm) 10:00</p> <p>Practical Duration (hh:mm) 38:00</p> <p>Corresponding NOS Code CON/N0112</p>	<p>Theory:</p> <ul style="list-style-type: none"> • Standard practices for waterproofing works. • Drawings /sketches relevant to waterproofing works • Tools and equipment used for waterproofing works and their standard specifications. • Basic levelling tools used in masonry works • Process of carrying out layout marking and levelling for waterproofing works • Different material used for waterproofing and various ratios of mix proportion used for cement mortar mix for waterproofing works. • Process of performing various visual checks on materials and surface for waterproofing • Different type of defects present on concrete surfaces such as caulking etc. • Different surface preparation method prior to waterproofing such as 	<ul style="list-style-type: none"> 1. Hammer, 2. Brick chisel 3. Stone chisel 4. Comb chisel 5. Bolster 6. Masonry hand saw 7. Steel trowel, Float wooden/metal) 8. Straight edge (Aluminium) 9. Wood/rubber mallet, Spade (Phawda) 10. Mortar pan (Ghamela) 11. Corner trowel 12. Pointer trowel 13. Tuck pointing trowel 14. Line and pins 15. Screed board

Sr. No.	Module	Key Learning Outcomes	Equipment Required
		<ul style="list-style-type: none"> • prime coating • filling holes or depressions by cementitious material • washing down • Hacking of existing RCC surface • chipping / scraping of protrusions • cleansing free of dust • priming or sealing of surface • removing sharp edges • Different type of waterproofing works • Different type of waterproofing compounds used for waterproofing works • Procedure for laying out cementitious waterproofing course • Procedure for checking water leakage in waterproofed surface • Procedure for carrying out horizontal and vertical alignment of waterproofed course • Procedure for transferring levels on floor for maintaining desired slope. • Procedure for carrying out brick bat coba waterproofing • Various methods and techniques used to protect waterproofing of the surface from damage as per the site requirements. <p>Demonstration/ Practical :-</p> <ul style="list-style-type: none"> • Reading and interpreting the sketches/basic working drawing for waterproofing works • Selecting tools and performing checks to confirm their workability • Identifying common defects in concrete surface prior to waterproofing • Demonstrate preparation of surface prior to waterproofing works • Performing visual checks for sand, cement, waterproofing material and surface to be waterproofed. • Demonstrate marking and transferring of required levels for maintaining slope in waterproofing works. • Checking and ensuring that the cement mortar mix to confirm to specified proportion. • Demonstrate application of waterproofing cementitious to the prepared surface using appropriate tools. • Perform checks for detecting leakage on the waterproofed surface 	<ul style="list-style-type: none"> 16. Jointers 17. Steel lever 18. Plumb bob 19. Line string (line Dori) 20. Try square, 21. Spirit level 22. Measuring tape 23. Steel or wooden scale 24. Tapered rule 25. Gauge box 26. Wheel barrows 27. Wooden sleepers 28. Rhombus mesh 29. Mixing plat form (3'x5') 30. Red oxide 31. Helmet 32. Face shield 33. Safety goggles 34. Safety shoes 35. Safety belt 36. Ear defenders 37. Particle masks 38. Overalls Knee pad 39. Reflective jackets 40. Pencil

Sr. No.	Module	Key Learning Outcomes	Equipment Required
		<ul style="list-style-type: none"> • Demonstrate preparation of cement mortar in appropriate ratio including addition of waterproofing admixture • Demonstrate laying of brick bat coba course for waterproofing works • Demonstrate filling of all gaps in brick bat coba course using appropriate cement mortar up to specified thickness. • Demonstrate checks for vertical and horizontal alignment using appropriate tools of waterproofed surface. 	
5	<p>Build structures using random rubble masonry</p> <p>Theory Duration (hh:mm) 13:00</p> <p>Practical Duration (hh:mm) 51:00</p> <p>Corresponding NOS Code CON/N0113</p>	<p>Theory:-</p> <ul style="list-style-type: none"> • Standard practices for rubble masonry works • standard specifications of all tools and equipment required for rubble masonry along with care and maintenance • Different type of coursed and un-coursed rubble masonry works. • Different types of plasters and mortar requirements for the rubble masonry works as per the specification and aesthetic requirements • Various types of cement paste / adhesives used on the base • Various types of stones used in rubble masonry • Basic methods of stone work and finishing in rubble masonry • Procedure for preparation of sub base for random rubble masonry works • Procedure for performing visual checks on the materials used in random rubble masonry works. • Procedure for cutting stones to prepare for sides, edges and bed of random rubble masonry works. • Procedure for preparation of mortar for random rubble masonry works. • Various techniques / procedures to work with undressed and hammer dressed stones used for un-course and course random rubble masonry. • Procedure for building of wall in coursed and un-coursed random rubble masonry. • Importance of bond stones (through stones) and jambs at corners of random rubble masonry wall. • Procedure for laying course of dry rubble masonry works. 	<ol style="list-style-type: none"> 1. Hammer, 2. Brick chisel 3. Stone chisel 4. Comb chisel 5. Bolster 6. Masonry hand saw 7. Steel trowel, Float wooden/metal) 8. Straight edge (Aluminium) 9. Wood/rubber mallet, Spade (Phawda) 10. Mortar pan (Ghamela) 11. Corner trowel 12. Pointer trowel 13. Tuck pointing trowel 14. Line and pins 15. Screed board 16. Jointers 17. Steel lever 18. Plumb bob 19. Line string (line Dori) 20. Try square, 21. Spirit level 22. Measuring tape 23. Steel or wooden scale 24. Tapered rule 25. Gauge box 26. Lifting , appliances (wheel and rope, shackles, sling, belts) 27. Wheel barrows 28. Wooden sleepers

Sr. No.	Module	Key Learning Outcomes	Equipment Required
		<ul style="list-style-type: none"> • Various pointing and raking tools and techniques and method of pointing a joint as per specification • Procedure for performing raking of joints for pointing in random rubble masonry works. • Different mortar mixes used for pointing in random rubble masonry • Procedure for preparation of lime/cement, mortar for pointing works. • Procedure for performing various pointing works on random rubble masonry, namely: <ul style="list-style-type: none"> • flush pointing • weathered pointing • ribbon pointing <p><u>Demonstration/ Practical :-</u></p> <ul style="list-style-type: none"> • Demonstrate selection of tools for the random rubble masonry works. • Estimate amount of materials required for rubble masonry work • Perform checks to ensure preparation of sub- base for rubble masonry work • Demonstrate selection of surface finish as per requirement. • Demonstrate preparation of mortar mix in specified proportion for rubble masonry work • Demonstrate transferring of levels for rubble masonry work • Demonstrate checking of workability and proportion of cement mortar, quality of stones used in random rubble masonry and ensure proper soaking of stones prior to use. • Demonstrate preparation of the sides, edges, bed of stone to for both undressed and hammer dressed stones • Demonstrate laying and fixing of stones for both coursed and un-coursed Random Rubble Masonry. • Demonstrate the use of bond stone at corners and at jambs. • Demonstrate the checking of line and level of random rubble masonry work after regular interval • Demonstrate raking of joints, cleaning of joints for pointing works. • Demonstrate preparation of lime/cement mortar in required proportion for pointing works 	<ul style="list-style-type: none"> 29. Rhombus mesh 30. expanded metal mesh) 31. Mixing plat form (3'x5') 32. Red oxide 33. Helmet 34. Face shield 35. Safety goggles 36. Safety shoes 37. Safety belt 38. Ear defenders 39. Particle masks 40. Overalls Knee pad 41. Reflective jackets 42. Pencil

Sr. No.	Module	Key Learning Outcomes	Equipment Required
		<ul style="list-style-type: none"> • Demonstrate filling of joints for obtaining appropriate type of pointing works. • Demonstrate laying of stone for dry random rubble masonry works. • Ensure proper curing for pointing 	
6	<p>Carry out IPS / Tremix flooring</p> <p>Theory Duration (hh:mm) 13:00</p> <p>Practical Duration (hh:mm) 51:00</p> <p>Corresponding NOS Code CON/N0114</p>	<p>Theory:-</p> <ul style="list-style-type: none"> • Standard practices for masonry works • standard specifications of all tools and equipment required for masonry along some specialized tools for Tremix flooring such as : <ul style="list-style-type: none"> ❖ Vacuum de-watering Pump ❖ Floater Machine ❖ Double beam Screen Vibrator • Procedure for preparation of sub base for waterproofing works by watering and ramming. • Procedure for marking reference level and transferring of levels. • Various type of aggregates, type and grade of cement used and effect of water /cement ratio. • Different grade of concrete • Procedure for manual mixing of concrete and nominal mix proportion. • various admixtures used in concreting • Sequence of concrete pouring and placing. • Provision of cover for reinforcement w.r.t size of reinforcement • Procedure for pouring concrete in alternate panels. • Procedure for carrying out vibration of poured concrete • Different type pf vibrators used for concrete curing, their influence are use. • Procedure for avoiding shrinkage cracks in concrete • Different construction and expansion joints • Different tools used for grooving/providing expansion joints • Procedure for final trowelling of concrete for desired finish • Procedure for removal of excess water using Vacuum dewatered machine. • Use of screed vibrator • Different type of hardeners used in IPS/Tremix flooring. • Procedure of operating VDF in a narrow passage. <p>Demonstration/ Practical :-</p>	<ol style="list-style-type: none"> 1. Hammer, 2. Brick chisel 3. Stone chisel 4. Comb chisel 5. Bolster 6. Masonry hand saw 7. Steel trowel, Float wooden/metal) 8. Straight edge (Aluminium) 9. Wood/rubber mallet, Spade (Phawda) 10. Mortar pan (Ghamela) 11. Corner trowel 12. Pointer trowel 13. Tuck pointing trowel 14. Line and pins 15. Screed board 16. Jointers 17. Steel lever 18. Plumb bob 19. Line string (line Dori) 20. Try square, 21. Spirit level 22. Measuring tape 23. Steel or wooden scale 24. Tapered rule 25. Gauge box 26. Plate compactor 27. Concrete vibrator 28. Grouting 29. machine (Manual) 30. Dewatering machine(VDF) 31. Groove cutting machine 32. Cement , Sand (Medium) 33. Plasticizers 34. Common burnt clay brick (2nd class)

Sr. No.	Module	Key Learning Outcomes	Equipment Required
		<ul style="list-style-type: none"> • Demonstrate the checks to be carried out for inspection of area prior to concreting • Ensure appropriate preparation of site. • Demonstrate checks for formwork to avoid leakage and deviation in slope and alignment in PCC • Demonstrate reporting of the misalignment in formwork/reinforcement and ensure proper cover for reinforcement. • Demonstrate marking and transfer of levels on floor for required thickness using appropriate tools. • Demonstrate checks to be performed for assessing the grade of cement, fine aggregate and concrete prior to use. • Demonstrate checks for assessing preparation of panels as per specified size and type. • Demonstrate fixing of glass, aluminium or brass strip in cement mortar with their tops at appropriate level and according to slope • Carry out pouring of concrete in alternate panels. • Carry out compaction and finishing of the concrete surface • Carrying of cutting of groves for providing construction joints and expansion joints as per requirement • Carry out levelling of poured concrete to the specified levels maintaining required slope • Carry out Tremix/VDF Flooring by laying stone soling/boulder soling layer as first step. • Carry out laying of floor with slope as per requirement. • Carry out removal of excess water from top layer by VDF machine • Carry out cutting of groves for construction joints • Ensure curing of the finished floor. 	<ul style="list-style-type: none"> 35. Coarse aggregates 36. Rubble stone (Natural stone) 37. Water proofing compound with primer 38. Glass stiff, Scaffold set (Including all components) 39. Lifting , appliances (wheel and rope, shackles, sling, belts) 40. Wheel barrows 41. Wooden sleepers 42. Rhombus mesh 43. expanded metal mesh) 44. Mixing plat form (3'x5') 45. Red oxide 46. Helmet 47. Face shield 48. Safety goggles 49. Safety shoes 50. Safety belt 51. Ear defenders 52. Particle masks 53. Overalls Knee pad 54. Reflective jackets 55. Pencil
7	<p>Work effectively in a team to deliver desired results at the workplace</p> <p>Theory Duration (hh:mm) 06:00</p>	<p>Theory:-</p> <ul style="list-style-type: none"> • Method of oral and written communication skills with co-workers, trade seniors while handling and carrying out visual checks on materials, , tools and equipment • Reading and interpretation of method statements, formats, permits, protocols, checklists for works 	<ul style="list-style-type: none"> 1. Classroom having seating requirement for 30 people. 2. Toilet/Urinals (Separate for gents and Ladies) 3. Projector Blackboard

Sr. No.	Module	Key Learning Outcomes	Equipment Required
	<p>Practical Duration (hh:mm) 18:00</p> <p>Corresponding NOS Code CON/N8001</p>	<ul style="list-style-type: none"> • How to interpret scope of brick/block , rubble masonry, plastering, waterproofing and IPS/Tremix flooring activities, material/ tools handling by adhering to instructions or consulting with seniors • Method of providing instruction to subordinates or reporting to seniors clearly and promptly • Seek necessary support and complete assigned tasks within stipulated time duration • Keep good relation and maintain well behaviour with co-workers <p><u>Demonstration/ Practical :-</u> The skills will be developed and practiced while carrying out following trade related activities in a predictable and familiar working condition</p> <ul style="list-style-type: none"> • Selection of materials, tools or devices for defined purpose under masonry works and providing instructions to subordinates for the same. • Handling of tools, equipment and materials for brick/block work, plastering works, waterproofing, rubble masonry works and IPS/Tremix flooring including efficiently communicating with co-workers for desired requirement as per specification • Carrying out brick/block work, plastering works, waterproofing, rubble masonry works and IPS/Tremix flooring while working as a team to ensure optimum utilization of material and resources • Carrying out general masonry works utilizing the effort of co-workers. • Undertaking visual checks to assess the quality of material and check line, level and alignments of work • Selection and handing over of desired/ appropriate tools/ materials while assisting trade senior 	
8	<p>Plan and organize work to meet expected outcomes</p> <p>Theory Duration (hh:mm) 04:00</p> <p>Practical Duration (hh:mm) 12:00</p>	<p>Theory:-</p> <ul style="list-style-type: none"> • To plan brick/block , rubble masonry, plastering, waterproofing and IPS/Tremix flooring activities within defined scope of work • Basic concept of productivity, sequence of working and implementation of safety and organizational norms while working 	<ol style="list-style-type: none"> 1. Classroom having seating requirement for 30 people. 2. Toilet/Urinals (Separate for gents and Ladies) 3. Projector Blackboard

Sr. No.	Module	Key Learning Outcomes	Equipment Required
	<p>Corresponding NOS Code CON/N8002</p>	<ul style="list-style-type: none"> • Upkeep, storing and stacking methods of tools, materials used for domain specific works • Requisition of resources, reporting for requirement of resources orally and in written to concerned authority - (T/P) <p>Demonstration/ Practical :-</p> <ul style="list-style-type: none"> • The skills will be developed and practiced while carrying out following trade related activities in a predictable and familiar working condition • Selection of materials, tools or devices for defined purpose in an optimum manner • Handling/organizing masonry tools, material, fixtures and device for brick/block, rubble masonry, plastering, waterproofing and IPS/Tremix flooring works. • Prioritize all works/ activities • Planning brick/block, rubble masonry, plastering, waterproofing and IPS/Tremix flooring works as per scope and schedule. • Carrying out cladding of natural stones ensuring optimum utilization of material and resources • Optimum use of resources while performing task • Adherence to stipulated timelines for completion of flooring and cladding activities/ tasks 	
9	<p>Work according to personal health, safety and environment protocol at construction site</p> <p>Theory Duration (hh:mm) 06:00</p> <p>Practical Duration (hh:mm) 18:00</p> <p>Corresponding NOS Code CON/N9001</p>	<p>Theory:-</p> <ul style="list-style-type: none"> • Types of hazards involved in construction sites • Types of hazards involved in masonry works • Emergency safety control measures and actions to be taken under emergency situation • Concept of :- <ol style="list-style-type: none"> 1. First Aid process 2. Use of fire extinguisher 3. Classification of fires and fire extinguisher 4. Safety drills 5. Types and use of PPEs as per general safety norms 6. Reporting procedure to the concerned authority in emergency situations 	<ol style="list-style-type: none"> 1. Safety Helmets 2. Face shield 3. Overalls 4. Knee pads 5. Safety shoes 6. Safety belts 7. Safety harness 8. Safety Gloves 9. Safety goggles 10. Particle masks 11. Ear Plugs 12. Reflective jackets 13. Fire Extinguisher 14. Fire prevention kit 15. First Aid box 16. Safety tags 17. Safety Notice board

Sr. No.	Module	Key Learning Outcomes	Equipment Required
		<ul style="list-style-type: none"> • Standard procedure of handling, storing and stacking material, tools and accessories • What is safe disposal of waste, type of waste and their disposal • Type of cutting tools, their standards and area of application • basic ergonomic principles as per applicability <p>Demonstration/ Practical :-</p> <ul style="list-style-type: none"> • The skills will be developed and practiced while carrying out following trade related activities in a predictable and familiar working condition. • Selection of PPEs and use them appropriately as per working need of brick/block ,rubble masonry, plastering, waterproofing and IPS/Tremix flooring operations, handling, storing, stacking and shifting of stones, tools and devices • Selection of PPEs and use them appropriately as per working need of brick/block work, cutting and shaping stones for rubble masonry works, waterproofing and plastering works • Analysis of hazards involved in cutting and fixing stone for rubble masonry works/ fixing brick/block and stone for masonry works or informing to seniors regarding hazardous conditions • Identification of locations, situations/ circumstances, malpractices which can be hazardous for works • Selection of fire extinguisher based on classification of fire, standard practice of storing & stacking firefighting equipment/ materials at work locations • Disposal of waste materials as per their nature and effects on weather 	
	<p>Total Duration</p> <p>Theory Duration 91:00</p> <p>Practical Duration 309:00</p>	<p>Unique Equipment Required:</p> <p>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, Plate compactor, Concrete vibrator, Grouting , machine (Manual), Dewatering machine(VDF), Groove cutting machine, Cement , Sand (Medium) , Plasticizers , Common burnt clay brick (2nd class), Coarse aggregates , Rubble stone (Natural stone), Water proofing compound with primer, Glass stiff, Scaffold set (Including all components), Lifting , appliances (wheel and rope, shackles,</p>	



Sr. No.	Module	Key Learning Outcomes	Equipment Required
		<p>sling, belts), Wheel barrows, Wooden sleepers, Rhombus mesh , expanded metal 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,</p> <p>Infrastructure</p> <p>Class room for theory and assessment with 30 study chairs , Workshop/Mock-up yard for practical training and assessment, Masonry wall (For plastering), Toilet/Urinals (Separate for gents and Ladies), 3 phase power supply points , Single phase power supply points, Fire extinguishers (mechanical foam, DCP, CO2 and sand buckets with stand), First aid kit, Tool box with lock and key</p>	

Grand Total Course Duration: **400 Hours, 0 Minutes**

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



Trainer Prerequisites for Job role: “Mason General” mapped to Qualification Pack: “CON/Q0103, v1.0”

Sr. No.	Area	Details
1	Description	To deliver accredited training service, mapping to the curriculum detailed above, in accordance with the Qualification Pack “CON/Q0103”.
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/12 th standard pass
4a	Domain Certification	Trainer/Assessor-70% in each NOS & 80% overall, Lead trainer/Lead Assessors- 70% in each NOS and overall 90%
4b	Platform Certification	Trainer/Assessor-80% in each NOS and Lead trainer/Lead Assessors-90% in each NOS
5	Experience	i. Technical Degree holder with minimum five years of Field experience and preferably two years of teaching experience, or, ii. In case of a Diploma Holder seven years of field experience and preferably two years of teaching experience or, iii. In case of ITI/12 th minimum ten years of field experience and preferably two years of teaching experience.



Annexure: Assessment Criteria

Assessment Criteria	
Job Role	Mason General
Qualification Pack	CON/Q0103, v1.0
Sector Skill Council	Construction

Sr. No.	Guidelines for Assessment
1	Criteria for assessment for each Qualification Pack will be created by the Sector Skill Council. Each Performance Criteria (PC) will be assigned marks proportional to its importance in NOS. SSC will also lay down proportion of marks for Theory and Skills Practical for each PC.
2	The assessment for the knowledge part will be based on knowledge bank of questions created by Assessment Bodies subject to approval by SSC
3	Individual assessment agencies will create unique question papers for knowledge/theory part for assessment of candidates as per assessment criteria given below
4	Individual assessment agencies will create unique evaluations for skill practical for every student at each examination/training centre based on assessment criteria.
5	The passing percentage for each QP will be 70%. To pass the Qualification Pack, every trainee should score a minimum of 70% individually in each NOS.
6	The Assessor shall check the final outcome of the practices while evaluating the steps performed to achieve the final outcome
7	The trainee shall be provided with a chance to repeat the test to correct his procedures in case of improper performance, with a deduction of marks for each iteration.
8	After the certain number of iteration as decided by SSC the trainee is marked as fail, scoring zero marks for the procedure for the practical activity.
9	In case of successfully passing only certain number of NOS's, the trainee is eligible to take subsequent assessment on the balance NOS's to pass the Qualification Pack within the specified timeframe set by SSC.
10	Minimum duration of Assessment of each QP shall be of 4hrs/trainee.

				Marks Allocation	
		Total Mark	Out Of	Theory	Skills Practical
CON/N0110: Construct masonry structures using brick / block	PC1. read and interpret the basic working drawings / sketches before the commencement of brick / block work	100	2.5	0.5	2
	PC2. ensure tools are in working condition		1.25	0.25	1
	PC3. set out the layouts as per instructions from superiors		2.25	0.25	2
	PC4. check for adequate roughness/wetting of surface		1.25	0.25	1
	PC5. identify and transfer required levels using appropriate tools		2.75	0.75	2
	PC6. visual check for quality of bricks / blocks prior to use		5	1	4
	PC7. ensure fine aggregate is sieved as per grade requirement		2.5	0.5	2
	PC8. ensure bricks / blocks are soaked prior to use		2.5	0.5	2
	PC9. select appropriate tools and equipments as per the tasks at requirement such as: <ul style="list-style-type: none"> Different types of Trowels (of the right blade size) Masons Hammer Blocking Chisel Mashing Hammer Jointers 		3.5	0.5	3
	PC10. break bricks to required shape and size using appropriate tools		4	1	3
	PC11. estimate the quantity of raw material required		2.5	0.5	2
	PC12. lay and fix bricks / blocks as per specification within tolerance limit using appropriate mortar/adhesive as per applicability		6	1	5
	PC13. maintain that rise of brick work / block work is in line & level		2.5	0.5	2
	PC14. ensure proper curing of constructed masonry structure		2	1	1
	PC15. maintain required level and specified slope for construction		2.5	0.5	2
	PC16. check vertical and horizontal alignment using appropriate tools		2.5	0.5	2
	PC17. maintain line and level of each course of brickwork using wooden / aluminium straight edge sections		2.5	0.5	2
	PC18. set out 90° corners using builders square or 3-4-5 method and check right angle		2.5	0.5	2

	PC19. perform proper pointing and raking of joint to obtain desired surface for exposed brick work		2.25	0.25	2
	PC20. ensure proper bonding with old and new surface		2.25	0.25	2
	PC21. ensure lime/cement mortar for pointing is prepared as per specification		1.5	0.5	1
	PC22. fill joints with appropriate mortar to obtain specified type of pointing		5.5	1.5	4
	PC23. carry out various types of pointing works as per specification using appropriate tools and technique		6	1	5
	PC24. ensure proper curing of pointing		2.5	0.5	2
	PC25. maintain set out of tread and riser of staircase as per drawing/instruction		3.5	0.5	3
	PC26. maintain masonry works as per required bond, alignment and plumb		1.5	0.5	1
	PC27. maintain bricks/block for manholes as per required line & level and providing channels and benching		4	1	3
	PC28. lay and fix paver block to designed pattern & finish the joints as specified		2.5	0.5	2
	PC29. install anchors and ties for masonry arches		1.25	0.25	1
	PC30. install arch masonry unit by laying and aligning as per specified bond		4	1	3
	PC31. cut creepers around corners and full joints to obtain a flushed structure		2.25	0.25	2
	PC32. ensure proper curing of constructed masonry structure		1.25	0.25	1
	PC33. remove deteriorated elements from masonry structures using tools such as saws drills and chisels without causing damage to adjacent structure		2.25	0.25	2
	PC34. reinstall brick/block to match previous or existing work		2.25	0.25	2
	PC35. perform proper pointing and raking of joint to obtain desired surface for exposed brick work		2.25	0.25	2
	PC36. ensure proper bonding with old and new surface		2.25	0.25	2
		Total	100	20	80
CON/N0111: Execute plaster on internal & external Masonry & RCC structure	PC1. read sketches for plastering work	100	2.5	0.5	2
	PC2. select correct materials, tools, tackles and equipments, handle and store it properly at workplace		1.25	0.25	1
	PC3. ensure that surface receiving plaster is prepared appropriately		2.5	0.5	2
	PC4. set layouts as per the specification prior to start of plastering work		2.5	0.5	2
	PC5. produce appropriate levels and make any grooves or lines on the surface as instructed		1.25	0.25	1

	PC6. ensure sieving of fine aggregate as per grade requirement		2.5	0.5	2
	PC7. check the quality of surface to be plastered		2.5	0.5	2
	PC8. check for quality and consistency of cement mortar mix		5	1	4
	PC9. ensure that the correct tools and equipments are selected for plastering work as per requirement		10	2	8
	PC10. moisten surface sufficiently before starting of the plastering work		5	1	4
	PC11. ensure that cement mortar is mixed in specified proportion including addition of additives if any		5	1	4
	PC12. apply cement slurry on receiving surface uniformly		5	1	4
	PC13. apply the plastering mix of specified thickness on the surface		10	2	8
	PC14. finish the surface by using correct tools as per the required finish		10	2	8
	PC15. check for horizontal & vertical alignment during and after plastering		5	1	4
	PC16. check for vertical and horizontal alignment using appropriate tools		10	2	8
	PC17. check for slope or maintain falls of the floor		10	2	8
	PC18. check for right angle at corner if required		10	2	8
		Total	100	20	80
CON/N0112: Carry out waterproofing work for structures using cementitious materials	PC1. identify and correct defects including caulking by sealing joints or seams in various concrete structures	100	2.5	0.5	2
	PC2. clean and wash the surface to be water proofed		2.25	0.25	2
	PC3. ensure bricks are soaked overnight prior to laying a course		1.25	0.25	1
	PC4. prepare the surface to be waterproofed through by the following method <ul style="list-style-type: none"> • prime coating • filling holes or depressions by cementitious material • washing down • Hacking of existing RCC surface • chipping / scraping of protrusions • cleansing free of dust • priming or sealing of surface • removing sharp edges 		4	1	3
	PC5. check the quality of cement and sand for usability		5	1	4
	PC6. check the consistency of grouting material		2.5	0.5	2
	PC7. check the usability of waterproofing material		2.5	0.5	2
	PC8. mark and transfer required levels at a regular interval in order to maintain proper slope of finished surface in case of horizontal surface		5	1	4
	PC9. prepare waterproofing cement mortar mixture as per specification for the respective surfaces		6	1	5

	PC10. apply waterproofing cementitious mixture to the prepared surface as specified		10	2	8
	PC11. finish the surface using appropriate tool as per the required surface finish		5	1	4
	PC12. protect waterproofed surfaces from any damage		4	1	3
	PC13. check for further leakage of water		5	1	4
	PC14. ensure all non-structural gaps are filled prior to laying brick bat course		5	1	4
	PC15. prepare a cement mortar in appropriate ratio including addition of waterproofing admixture		5	1	4
	PC16. spread a mortar of even thickness on the surface		5	1	4
	PC17. lay brick bat on the prepared mortar ensuring proper placement and uniform gaps between bricks		10	2	8
	PC18. fill all gaps in brick bat using cement mortar		5	1	4
	PC19. finish the top surface smooth with cement mortar prepared in specified proportion along with admixtures		5	1	4
	PC20. identify and transfer required levels using appropriate tools		2.5	0.5	2
	PC21. check horizontal and vertical alignment using appropriate tools		3.5	0.5	3
	PC22. mark and transfer required levels at a regular interval in order to maintain proper slope of finished surface in case of horizontal surface		4	1	3
		Total	100	20	80
CON/N0113: Build structures using random rubble masonry	PC1. ensure that the correct tools and tackles are selected for use in the rubble masonry	100	1.25	0.25	1
	PC2. roughly estimate amount of materials required to complete a rubble masonry job work		1.25	0.25	1
	PC4. ensure proper compaction of base prior to commencement of work		1.25	0.25	1
	PC5. select the particular type of surface finish as per the site requirements		1.25	0.25	1
	PC6. prepare the sides, edges, bed of stone to ensure proper bonding of stones		1.25	0.25	1
	PC5. Check for line, level and alignment		1.25	0.25	1
	PC7. mix mortar for rubble masonry in specified ratio including dry & wet mix		1.25	0.25	1
	PC8. identify and transfer required levels using appropriate tools prior to rubble masonry work		1.25	0.25	1
	PC9. check for workability and proportion of cement mortar		5	1	4
	PC10. check the quality of stones used in random rubble masonry		3.5	0.5	3
	PC11. ensure proper soaking of stones prior to laying		1.5	0.5	1



	PC12. work with both undressed and hammer dressed stones as per the requirement of the construction site		8	2	6
	PC13. lay stones to build wall of un-course random rubble or course random rubble as per instruction		11	3	8
	PC14. knock off all projecting corners of the laid stones with joints filled and flushed as per the requirements of the site for the un-course random rubble masonry		9	3	6
	PC15. use large stones at the corners and at jambs to increase the strength as per the un-course random rubble masonry requirements		7	2	5
	PC16. ensure proper curing of rubble masonry structure		5	2	3
	PC17. perform raking of joints as specified prior to drying of bonding mortar		2.5	0.5	2
	PC18. ensure that joints are cleaned and surface is wet prior to pointing		1.5	0.5	1
	PC19. ensure lime/cement mortar for pointing is prepared as per specification		1.5	0.5	1
	PC20. fill joints with appropriate mortar to obtain specified type of pointing		5	1	4
	PC21. carry out various types of pointing works as per specification using appropriate tools and technique		7	1	6
	PC22. ensure proper curing of pointing		2.5	0.5	2
	PC23. lay and fix stones for construction of walls without use of mortar		5	1	4
	PC24. knock off all projecting corner		5	1	4
	PC25. mark and transfer required levels at a regular interval in order to maintain proper slope of finished surface in case of horizontal surface		5	1	4
	PC26. check horizontal and vertical alignment using appropriate tools		5	1	4
		100			
		Total	100	20	80
CON/N0114: Carry out IPS / Tremix flooring works	PC1. inspect the work area prior to concreting, ensure levelling in case of any undulations observed on the surface prior to concreting		2.5	0.5	2
	PC2. ensure surface is prepared appropriately and report any deviation in slope and alignment in PCC		2.5	0.5	2
	PC3. report any gaps in formwork to avoid leakage		2.5	0.5	2
	PC4. report any misalignment in formwork/reinforcement and ensure proper cover for reinforcement is provided		2.5	0.5	2
	PC5. mark reference level on the wall & transfer this marking to all floor locations using appropriate tools		5	1	4
	PC6. mark flooring thickness level and provide dummy level dots at specified intervals for ensuring required slope		5	1	4
		100			

PC7. check the grade of cement prior to use in case of manual mixing	2.5	0.5	2
PC8. ensure fine aggregate is sieved as per grade requirement	2.5	0.5	2
PC9. check that concrete is mixed in appropriate proportion	5	1	4
PC10. visually assess the concrete mix for usability and workability	5	1	4
PC11. notify superiors for detrimental quality of concrete	5	1	4
PC12. ensure specified concrete mix is used at allocated location	5	1	4
PC13. check that panels prepared are of specified size and type	2.5	0.5	2
PC14. fix the glass, aluminum or brass strip in cement mortar with their tops at appropriate level and according to slope	2.5	0.5	2
PC15. ensure panels are made as per specified size	2.5	0.5	2
PC16. ensure concrete is poured in alternate panels/specified panels as per requirement	5	1	4
PC17. remove excess cement slurry and any marks on the surface	2.5	0.5	2
PC18. level the concrete surface with a straight edge and to the required finish with a wooden float / trowel	2.5	0.5	2
PC19. spread cement punning over the IPS concrete for smooth finish surface and allow it to soak into the concrete, as per requirement	2.5	0.5	2
PC20. provide construction joints and expansion joints as per requirement	2.5	0.5	2
PC21. level poured concrete to the specified levels maintaining required slope	5	1	4
PC22. ensure curing of the finished floor surface for the specified time	2.5	0.5	2
PC23. level the surface and lay stone soling / boulder soling layer	2.5	0.5	2
PC24. lay the floor with slope maintained in PCC work above the stone soling	2.5	0.5	2
PC25. remove excess water from the top layer of wet concrete without removing cement or sand particles through vacuum de-watering machines	5	1	4
PC26. ensure floater work within green concrete surface	2.5	0.5	2
PC27. carry out Tremix flooring in specified panel on RCC floors ensuring intactness of rebar and cover	2.5	0.5	2
PC28. cut grooves on concrete at specified intervals for construction joints	2.5	0.5	2
PC29. provide expansion joints as per requirement	2.5	0.5	2
PC30. carry out curing of finished concrete as per specifications	2.5	0.5	2



	PC31. ensure finished levels have required slope		2.5	0.5	2
		Total	100	20	80
CON/N8001: Work effectively in a team to deliver desired results at the workplace	PC1. pass on work related information/ requirement clearly to the team members	100	10	2	8
	PC2. inform co-workers and superiors about any kind of deviations from work		5	1	4
	PC3. address the problems effectively and report if required to immediate supervisor appropriately		5	1	4
	PC4. receive instructions clearly from superiors and respond effectively on same		5	1	4
	PC5. communicate to team members/subordinates for appropriate work technique and method		5	1	4
	PC6. seek clarification and advice as per requirement and applicability		10	2	8
	PC7. hand over the required material, tools tackles, equipment and work fronts timely to interfacing teams		30	6	24
	PC7. hand over the required material, tools tackles, equipment and work fronts timely to interfacing teams		30	6	24
		Total	100	20	80
CON/N8002: Plan and organize work to meet expected outcomes	PC1. understand clearly the targets and timelines set by superiors	100	10	2	8
	PC2. plan activities as per schedule and sequence		10	2	8
	PC3. provide guidance to the subordinates to obtain desired outcome		10	2	8
	PC4. plan housekeeping activities prior to and post completion of work		10	2	8
	PC5. list and arrange required resources prior to commencement of work		10	2	8
	PC6. select and employ correct tools, tackles and equipment for completion of desired work		10	2	8
	PC7. complete the work with allocated resources		10	2	8
	PC8. engage allocated manpower in an appropriate manner		10	2	8
	PC9. use resources in an optimum manner to avoid any unnecessary wastage		5	1	4
	PC10. employ tools, tackles and equipment with care to avoid damage to the same		5	1	4
	PC11. organize work output, materials used, tools and tackles deployed		5	1	4
	PC12. processes adopted to be in line with the specified standards and instructions		5	1	4
		Total	100	20	80
CON/N9001: Work according to personal health, safety and environment	PC1. identify and report any hazards, risks or breaches in site safety to the appropriate authority	100	5	1	4
	PC2. follow emergency and evacuation procedures in case of accidents, fires, natural calamities		5	1	4



protocol at construction site	PC3. follow recommended safe practices in handling construction materials, including chemical and hazardous material whenever applicable		10	2	8
	PC4. participate in safety awareness programs like Tool Box Talks, safety demonstrations, mock drills, conducted at site		5	1	4
	PC5. identify near miss , unsafe condition and unsafe act		5	1	4
	PC6. use appropriate Personal Protective Equipment (PPE) as per work requirements including: <ul style="list-style-type: none"> • Head Protection (Helmets) • Ear protection • Fall Protection • Foot Protection • Face and Eye Protection, • Hand and Body Protection • Respiratory Protection (if required) 		10	2	8
	PC7. handle all required tools, tackles , materials & equipment safely		5	1	4
	PC8. follow safe disposal of waste, harmful and hazardous materials as per EHS guidelines		5	1	4
	PC9. install and apply properly all safety equipment as instructed		15	3	12
	PC10. follow safety protocol and practices as laid down by site EHS department		15	3	12
	PC11. collect and deposit construction waste into identified containers before disposal, separate containers that may be needed for disposal of toxic or hazardous wastes		10	2	8
	PC12. apply ergonomic principles wherever required		10	2	8
		Total	100	20	80