

QUALIFICATIONS PACK- OCCUPATIONAL STANDARDS FOR CONSTRUCTION INDUSTRY



Contents

1. Introduction.....	1
2. Qualifications Pack.....	2
3. Glossary of key terms.....	4
4. NOS Units.....	5

What are Occupational Standards(OS)?

- OS describe what individuals need to do, know and understand in order to carry out a particular job role or function
- OS are performance standards that individuals must achieve when carrying out functions in the workplace, together with specifications of the underpinning knowledge and understanding

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Introduction

Qualifications Pack – Mason Concrete

SECTOR: CONSTRUCTION

SUB-SECTOR: 1. Real Estate (Residential, Commercial & Institutional)
2. Infrastructure (Roads, Railways, Bridges, Runways & Industrial Units)
3. Power Generation (Hydro, Thermal & Nuclear)

OCCUPATION: MASONRY

REFERENCE ID: CON/Q0105

ALIGNED TO: NCO-2004/7123.90

Mason Trade is one of the basic trades in Construction Industry and its application is common to construction of structures in Real Estate, Infrastructure and Power sub sector. It involves building various structures with materials including brick, block, stone and concrete.

Brief Job Description: Mason Concrete is responsible for performing routine concreting works in various structural elements. The work involves placing, leveling and finishing both RCC and PCC in various structural elements, in situ and in pre cast units. This also includes repairing of concrete and carrying out IPS/Tremix flooring.

Personal Attributes: The individual is expected to be physically fit and should be able to work across various locations withstanding extreme weather/site conditions while working at the construction site or in a casting yard. The person must be able to perform efficiently within a team and handle the various concreting tools and materials and work responsibly.

Job Details	Qualifications Pack Code	CON/Q0105		
	Job Role	Mason- Concrete		
	Credits(NSQF)	TBD	Version number	1.0
	Sector	Construction	Drafted on	07/03/2015
	Sub Sector	<ol style="list-style-type: none"> Real Estate (Residential, Commercial & Institutional) Infrastructure (Roads, Railways, Bridges, Runways & Industrial Units) Power Generation (Hydro, Thermal & Nuclear) 	Last reviewed on	23/03/2015
	Occupation	Masonry	Next review date	23/03/2017
	NSQC Clearance on	19/05/2015		

Job Role	Mason - Concrete
Role Description	To work as a skilled Mason and perform routine works such as placing, leveling and finishing both RCC and PCC in various structural elements, in situ and in pre cast units, including repairing of concrete, under the supervision of level 4 and above as per applicability. The work also included carrying out IPS/Tremix flooring .Also the job holder should be able to supervise and engage the mason level-2 and below suitably and productively.
NSQF Level	3
Minimum Educational Qualifications*	Equivalent to minimum 5 th standard
Maximum Educational Qualifications*	N.A
Training (Suggested but not mandatory)	Trained to qualify test & assessment by authorized agency for behavior, knowledge & skill as per all relevant NOS for General Mason level-3.Recommended training period of 8 to 12 weeks.
Minimum Job Entry Age	18 Years
Experience	<ul style="list-style-type: none"> • Minimum five years site experience for non-trained worker • 2years' experience with a Masonry Level 2 qualified
Applicable National Occupational Standards (NOS)	Compulsory: <ol style="list-style-type: none"> 1. CON/N0114: Carry out IPS / Tremix flooring 2. CON/N0117: Place, level and finish concrete in various structural elements including repair works

	<ol style="list-style-type: none">3. <u>CON/N8001: Work effectively in a team to deliver desired results at the workplace</u>4. <u>CON/N8002: Plan and organize work to meet expected outcomes</u>5. <u>CON/N9001: Work according to personal health, safety and environment protocol at construction site</u> <p>Optional:</p> <p>N.A</p>
Performance Criteria	As described in the relevant OS units

Definitions	Keywords / Terms	Description
	Sector	Sector is conglomeration of different business operations having similar business and interests. It may also be defined as a distinct subset of the economy whose components share similar characteristics and interests.
	Sub-Sector	Sub-Sector is derived from a further breakdown based on the characteristics and interests of its components
	Occupation	Occupation is a set of job roles, which perform similar/related set of functions in an industry
	Job role	Job role defines a unique set of functions that together form a unique employment opportunity in an organization.
	Occupational Standards (OS)	OS specify the standards of performance an individual must achieve when carrying out a function in the workplace, together with the knowledge and understanding they need to meet the standard consistently. Occupational Standards are applicable both in the Indian contexts.
	Performance Criteria	Performance Criteria are statements that together specify the standard of performance required when carrying out a task.
	Qualifications Pack (QP)	Qualifications Pack comprises the set of OS, together with the educational, training and other criteria required to perform a job role. A Qualification Pack is assigned a unique qualification pack code
	Qualification Pack Code	Qualification Pack Code is a unique reference code that identifies a qualifications pack.
	National Occupational Standards (NOS)	NOS are Occupational Standards which apply uniquely in the Indian context.
	Scope	Scope is the set of statements specifying the range of variables that an individual may have to deal with in carrying out the function which have a critical impact on the quality of performance required.
	Knowledge and Understanding	Knowledge and Understanding are statements which together specify the technical, generic, professional and organizational specific knowledge that an individual needs in order to perform to the required standard
	Organizational Context	Organizational Context includes the way the organization is structured and how it operates, including the extent of operative knowledge managers have of their relevant areas of responsibility.
Technical Knowledge	Technical Knowledge is the specific knowledge needed to accomplish specific designated responsibilities.	
Core Skills / Generic Skills	Core Skills or Generic Skills are a group of skills that are key to learning and working in today's world. These skills are typically needed in any work environment. In the context of the OS, these include communication related skills that are applicable to most job roles.	
Acronyms	Keywords /Terms	Description
	CON	Construction
	NSQF	National Skill Qualifications Framework
	QP	Qualification Pack
	OS	Occupational Standards
	TBD	To Be Decided

CON/N0114

Carry out IPS / Tremix flooring works

National Occupational Standard



Overview

This unit covers the skills and knowledge for an individual to be proficient in executing IPS and Tremix flooring works.

CON/N0114

Carry out IPS / Tremix flooring works

National Occupational Standard

Unit Code	CON/N0114
Unit Title (Task)	Carry out IPS / Tremix flooring works
Description	This unit describes the skills and knowledge required to work on IPS & Tremix flooring
Scope	<p>This scope covers the following:</p> <ul style="list-style-type: none"> • Carry out preparatory work prior to IPS / Tremix flooring • Check for line, level and alignment. • Check the materials used for IPS / Tremix flooring in case of manual mixing • Check the materials used for IPS / Tremix flooring in case of machine mixing • Carry out IPS flooring • Carry out Tremix / VDF flooring
Performance Criteria (PC) w.r.t. the Scope	
Element	Performance Criteria
Carry out preparatory work prior to IPS/Tremix flooring	<p>To be competent, the user / individual on the job must be able to:</p> <p>PC1. inspect the work area prior to concreting, ensure leveling in case of any undulations observed on the surface prior to concreting</p> <p>PC2. ensure surface is prepared appropriately and report any deviation in slope and alignment in PCC</p> <p>PC3. report any gaps in formwork to avoid leakage</p> <p>PC4. report any misalignment in formwork/reinforcement and ensure proper cover for reinforcement is provided</p>
Check for line, level and alignment	<p>PC5. mark reference level on the wall & transfer this marking to all floor locations using appropriate tools</p> <p>PC6. mark flooring thickness level and provide dummy level dots at specified intervals for ensuring required slope</p>
Check the materials used for IPS/Tremix flooring in case of manual mixing	<p>PC7. check the grade of cement prior to use in case of manual mixing</p> <p>PC8. ensure fine aggregate is sieved as per grade requirement</p> <p>PC9. check that concrete is mixed in appropriate proportion</p>
Check the materials used for IPS/Tremix flooring in case of machine mixing	<p>PC10. visually assess the concrete mix for usability and workability</p> <p>PC11. notify superiors for detrimental quality of concrete</p> <p>PC12. ensure specified concrete mix is used at allocated location</p> <p>PC13. check that panels prepared are of specified size and type</p>
Carry out IPS Flooring work	<p>PC14. fix the glass, aluminum or brass strip in cement mortar with their tops at appropriate level and according to slope</p> <p>PC15. ensure panels are made as per specified size</p> <p>PC16. ensure concrete is poured in alternate panels/specified panels as per requirement</p>

CON/N0114

Carry out IPS / Tremix flooring works

	<p>PC17. remove excess cement slurry and any marks on the surface</p> <p>PC18. level the concrete surface with a straight edge and to the required finish with a wooden float / trowel</p> <p>PC19. spread cement punning over the IPS concrete for smooth finish surface and allow it to soak into the concrete, as per requirement</p> <p>PC20. provide construction joints and expansion joints as per requirement</p> <p>PC21. level poured concrete to the specified levels maintaining required slope</p> <p>PC22. ensure curing of the finished floor surface for the specified time</p>
Carry out Tremix / VDF Flooring work	<p>PC23. level the surface and lay stone soling / boulder soling layer</p> <p>PC24. lay the floor with slope maintained in PCC work above the stone soling</p> <p>PC25. remove excess water from the top layer of wet concrete without removing cement of sand particles through vacuum de-watering machines</p> <p>PC26. ensure floater work within green concrete surface</p> <p>PC27. carry out Tremix flooring in specified panel on RCC floors ensuring intactness of rebar and cover</p> <p>PC28. cut grooves on concrete at specified intervals for construction joints</p> <p>PC29. provide expansion joints as per requirement</p> <p>PC30. carry out curing of finished concrete as per specifications</p> <p>PC31. ensure finished levels have required slope</p>
Knowledge and Understanding (K)	
<p>A. Organizational Context (Knowledge of the company / organization and its processes)</p>	<p>The user/individual on the job needs to know and understand:</p> <p>KA1. standard practices for masonry work</p> <p>KA2. safety rules and regulations for handling & storing required masonry tools & materials</p> <p>KA3. personal protection including the use of related safety gears & equipments</p> <p>KA4. how to request tools and materials as per set procedures</p> <p>KA5. maintenance of tools and equipments</p>
<p>B. Technical Knowledge</p>	<p>The user/individual on the job needs to know and understand:</p> <p>KB1. how to use all masonry tools along with some specialized tools for Tremix flooring such as :</p> <ul style="list-style-type: none"> • Vacuum de-watering Pump • Floater Machine • Double beam Screen Vibrator <p>KB2. process to prepare the sub-base by watering and ramming</p> <p>KB3. provide for adequate slope in PCC (Plain Cement Concrete) in a base course</p> <p>KB4. how to make reference levels and transfer the markings to all locations where flooring is to be done</p> <p>KB5. various type and grade of cement used, affect of water /cement ratio and type of aggregates</p>

CON/N0114

Carry out IPS / Tremix flooring works

	<p>KB6. different mix proportion/grade of concrete</p> <p>KB7. sequence of concrete pouring and placing</p> <p>KB8. manual mixing of concrete and nominal mix proportions</p> <p>KB9. cover to reinforcement with respect to size of reinforcement</p> <p>KB10. how to pour concrete in alternate panels</p> <p>KB11. how to avoid shrinkage cracks in concrete</p> <p>KB12. various admixtures used in concreting</p> <p>KB13. different type of vibrators, their influence area and use</p> <p>KB14. construction and expansion joints</p> <p>KB15. cutting tools for providing joints</p> <p>KB16. final toweling process before the concrete is hardened</p> <p>KB17. excess water removal process using Vacuum dewatered machine</p> <p>KB18. use of screed vibrator</p> <p>KB19. hardener usage along with floater machine (if required) at the time of finishing the floor surface to increase abrasion resistance of the floor</p> <p>KB20. how to provide for space for narrow passage for operating float vibrator along a wall</p>
Skills (S)	
A. Core Skills/ Generic Skills	Writing Skills
	The user/ individual on the job needs to know and understand how to: SA1. write in one or more language, preferably the local language at the site
	Reading Skills
	The user/ individual on the job needs to know and understand how to: SA2. read in one or more language, preferably the local language at the site SA3. read sketches provided by the superior to do IPS /Tremix flooring works SA4. read instructions, guidelines, sign boards, safety rules and safety tags SA5. read instructions and exit routes during emergency
	Oral Communication (Listening and Speaking skills)
	The user/ individual on the job needs to know and understand how to: SA6. speak in one or more language, preferably one of the local language at the site SA7. listen and follow instructions given by the superior SA8. orally communicate with team member
B. Professional Skills	Decision Making
	The user/ individual on the job needs to know and understand how to: SB1. decide whether work place is safe for working and also relevant task is not creating hazardous condition for others

CON/N0114

Carry out IPS / Tremix flooring works

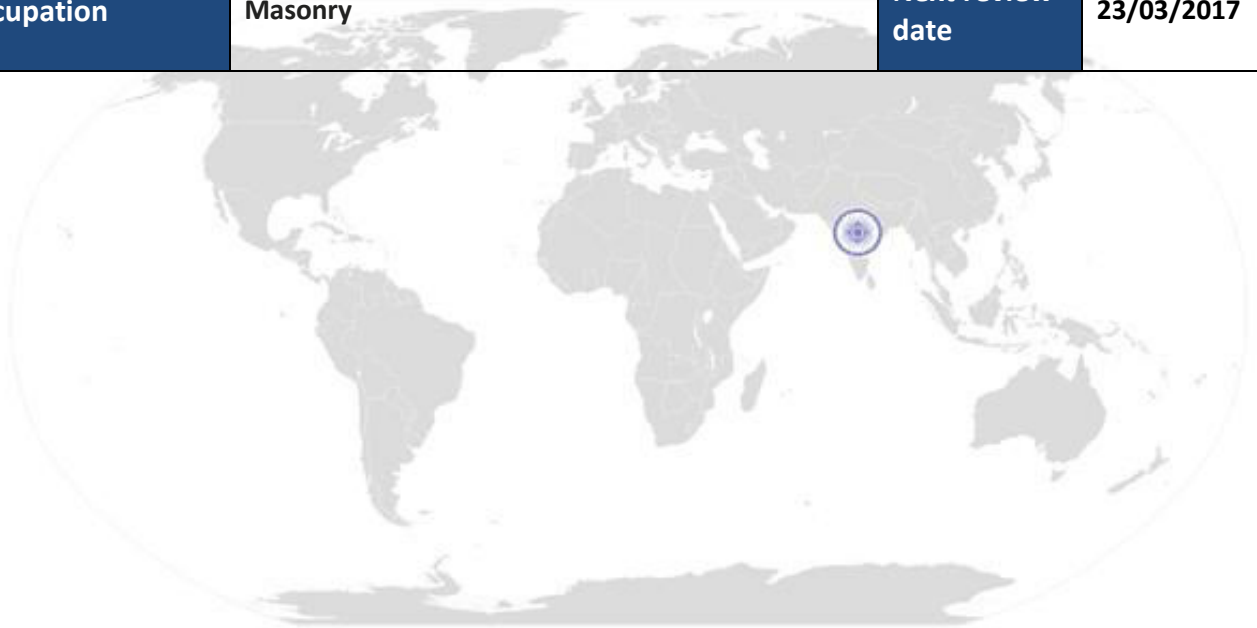
	<p>SB2. decide whether work is adequately defined for the day , work front is clear , andadequate materials and tools are available for performing the work</p>
	Plan and Organize
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SB3. plan work and organize required recourses in co-ordination with team members and superiors</p>
	Customer centricity
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SB4. complete work as per agreed time schedule and quality</p>
	Problem Solving
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SB5. resolve and solve any conflict within the team</p> <p>SB6. bring any noticeable issues faced (related to the flooring) to the attention of the superiors in a timely manner</p> <p>SB7. assess quantity and quality of materials for day work</p> <p>SB8. check quality of scaffolding/working platform from all aspects of safety</p> <p>SB9. dispose of construction debris & keep workplace safe and tidy for working</p>
	Analytical Thinking
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SB10. optimize resources efficiently</p> <p>SB11. minimize wastage in the workplace</p> <p>SB12. starting and finishing levels for day work</p> <p>SB13. reconcile material consumption</p>
	Critical Thinking
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SB14. evaluate the complexity of the task and seek assistance and support wherever required</p> <p>SB15. bring to the notice of the superiors any requirement of the requisite resources</p> <p>SB16. bring to the notice of the superiors violation of any safety norms which may leadto accidents</p>

CON/N0114

Carry out IPS / Tremix flooring works

NOS Version Control

NOS Code	CON/N0114		
Credits (NSQF)	TBD	Version number	1.0
Industry	Construction	Drafted on	07/03/2015
Industry Sub-sector	<ol style="list-style-type: none"> 1. Real Estate (Residential, Commercial & Institutional) 2. Infrastructure (Roads, Railways, Bridges, Runways & Industrial Units) 3. Power Generation (Hydro, Thermal & Nuclear) 	Last reviewed on	23/03/2015
Occupation	Masonry	Next review date	23/03/2017



CON/N0117

Place, level and finish concrete in various structural elements including repair works

National Occupational Standard



Overview

This NOS covers the skills and knowledge required by a workman for placing, leveling and finishing of concrete on various structural elements including repair work on concrete.

CON/N0117 *Place, level and finish concrete in various structural elements including repair works*

National Occupational Standard	Unit Code	CON/N0117
	Unit Title (Task)	Place, level and finish concrete in various structural elements including repair works
	Description	This unit describes the skills and knowledge required to place, level and finish concrete, both RCC and PCC, in various structural elements – in situ and pre cast .This also includes repair works on concrete.
	Scope	<p>This unit/task covers the following:</p> <ul style="list-style-type: none"> • Carry out preparatory work before pouring of concrete in case of manual and machine mixing • Check material used for concreting in case of manual mixing • Place and compact concrete on PCC & RCC structural elements • Screed and level wet concrete • Finish and cure concrete • Carry out concreting in pre cast segments • Carry out simple repair work on hardened concrete surfaces
Performance Criteria (PC) w.r.t. the Scope		
Element	Performance Criteria	
Carry out preparatory work before pouring of concrete manually & by machine	<p>To be competent, the user/individual on the job must be able to:</p> <p>PC1. inspect the area for completion of housekeeping works and remove any undulations on the surface prior to concreting</p> <p>PC2. ensure surface is prepared appropriately and report any deviation in slope and alignment</p> <p>PC3. report any gaps in formwork to avoid leakage</p> <p>PC4. report any misalignment in formwork/reinforcement and ensure proper cover for reinforcement is provided</p> <p>PC5. notify superiors for detrimental quality of concrete</p> <p>PC6. visually assess the concrete mix for usability and workability</p>	
Check material used for concreting in case of manual mixing	<p>PC7. check the type ,grade of cement and visual soundness of cement prior to use</p> <p>PC8. check and ensure sieved fine aggregate prior to use</p> <p>PC9. instruct and ensure that mixing of concrete is in specified ratio</p>	
Place and compact concrete on PCC & RCC structural elements	<p>PC10. handle and adjust the pouring equipments as per requirements</p> <p>PC11. ensure standard pouring height for concrete is maintained throughout pouring</p> <p>PC12. ensure pouring of concrete takes place in specified layers</p> <p>PC13. pour concrete to maintain specified levels & cover for steel reinforcement</p> <p>PC14. apply vibrator within influence depth and as per standard procedures</p> <p>PC15. ensure that the vibrator does not touch the reinforcement or is not applied to the face of the form</p>	

CON/N0117 *Place, level and finish concrete in various structural elements including repair works*

Screed and level wet concrete	<p>PC16. screed the concrete as per requirements using appropriate tools and technique</p> <p>PC17. push the excess concrete towards the formwork for easy removal</p> <p>PC18. float the concrete using appropriate tools</p> <p>PC19. level the edges and corners as per requirements using appropriate tools for semi-finished concrete</p> <p>PC20. provide construction/ control joints in concrete surface at pre-defined locations</p> <p>PC21. cut construction joints as per specification and requirements</p>
Finish and cure concrete	<p>PC22. smoothen the surface using appropriate tools, to ensure a consistent and durable final finish</p> <p>PC23. apply a final finish on the surface as per requirements using any of the following major techniques:</p> <ul style="list-style-type: none"> • Stamped concrete finish • Stenciling concrete finish • Broom finish • Rock salt finish <p>PC24. provide shear key /vertical construction joint or cut construction joint as per requirement</p> <p>PC25. ensure cleaning and removal of spilled concrete is carried out after work</p> <p>PC26. ensure proper curing of concrete by marking and monitoring of the curing time</p> <p>PC27. ensure proper barricading of the concrete area and prevent any damage to the poured concrete</p>
Carry out concreting in pre cast segment	<p>PC28. inspect the area for completion of housekeeping works and remove any debris from the surface prior to concreting</p> <p>PC29. report any gaps in formwork/moulds to avoid leakage</p> <p>PC30. report any misalignment in formwork/reinforcement</p> <p>PC31. check that cover for reinforcement is provided properly</p> <p>PC32. point out any inadequacy in application of release agent.</p> <p>PC33. comply with the sequence of pour during concreting</p> <p>PC34. pour concrete appropriately and as per system requirements in pre cast moulds</p> <p>PC35. carry out vibration of the concrete using internal/external vibrators as per applicability</p> <p>PC36. ensure all embedded parts are intact during vibration</p> <p>PC37. ensure pre cast segment surface is finished as per specification</p>
Carry out simple repair work on hardened concrete surfaces	<p>PC38. identify the type of defect on the concrete surface such as:</p> <ul style="list-style-type: none"> • air holes/voids • bulges • offset between joints

CON/N0117

Place, level and finish concrete in various structural elements including repair works

	<ul style="list-style-type: none"> • honeycombing <p>PC39. notify superiors for type of defect and repair required</p> <p>PC40. ensure repair work is carried out only under the knowledge of superiors</p> <p>PC41. prepare a suitable mortar for filing the air holes/voids</p> <p>PC42. apply the mortar and rub using carborundum stone to obtain a flushed & smooth surface</p> <p>PC43. carry out chipping of the surface to remove bulges and offsets as per requirement</p> <p>PC44. carry out surface grinding to remove bulges and irregularities in concrete surface using sander / grinder</p> <p>PC45. ensure grinding is performed within acceptable levels</p> <p>PC46. fill narrow / wide cracks in concrete using appropriate filler / compounds</p> <p>PC47. ensure proper curing of repaired structure along with proper blending with the adjacent structure</p>
Knowledge and Understanding (K)	
<p>A. Organizational Context (Knowledge of the company / organization and its processes)</p>	<p>The user/individual on the job needs to know and understand:</p> <p>KA1. standard practices for concreting work</p> <p>KA2. safety rules and regulations for handling and storing required concreting tools, equipments and materials</p> <p>KA3. personal protection including the use of related safety gears & equipments</p> <p>KA4. precautions and measures required while working in wet concrete areas</p> <p>KA5. request procedures for tools and materials</p> <p>KA6. maintenance of tools and equipments</p>
<p>B. Technical Knowledge</p>	<p>The user/individual on the job needs to know and understand:</p> <p>KB1. simple sketches related to concreting/ pre casting and repairing works</p> <p>KB2. basic principles of measurement</p> <p>KB3. basic properties of concrete including weight, slump & mix proportions</p> <p>KB4. standard specifications of all masonry concreting tools and their upkeep and repair</p> <p>KB5. how to select and use basic tools, tackles and equipments such as:</p> <ul style="list-style-type: none"> • measuring tape/rule, vibrator, shovels, rakes, etc. • screeding board / tools and tamping tools (hand, rolling, etc.) • large floating device like bull float <p>KB6. various type and grade of cement used, affect of water /cement ratio and type of aggregates</p> <p>KB7. different mix proportion/grade of concrete</p> <p>KB8. sequence of concrete pouring and placing</p> <p>KB9. manual mixing of concrete and nominal mix proportions</p> <p>KB10. cover to reinforcement with respect to size of reinforcement</p> <p>KB11. how to pour concrete in alternate panels</p>

CON/N0117

Place, level and finish concrete in various structural elements including repair works

	<p>KB12. how to avoid shrinkage cracks in concrete</p> <p>KB13. various admixtures used in concreting</p> <p>KB14. different type of vibrators, their influence area and use</p> <p>KB15. construction and expansion joints</p> <p>KB16. cutting tools for providing joints</p> <p>KB17. vibration in congested area</p> <p>KB18. appropriate technique for pouring of concrete in the form of layers as per the specification</p> <p>KB19. appropriate technique for vibrating of concrete in a staggered manner as per of the site requirements</p> <p>KB20. various types of vibrators used in concreting</p> <p>KB21. influence depth of vibrator / specifications of vibrator</p> <p>KB22. technique to avoid air pockets or voids while concreting</p> <p>KB23. appropriate technique for screeding of concrete</p> <p>KB24. appropriate technique for floating of concrete surface</p> <p>KB25. appropriate technique and extent to which construction joints must be provided</p> <p>KB26. importance of finishing concrete after initial setting of concrete/semi finished stage</p> <p>KB27. various major techniques of finishing and their respective application:</p> <ul style="list-style-type: none">• Float and trowel finish• Stamped concrete finish• Stenciling concrete finish• Broom finish• Rock salt finish <p>KB28. importance and use of releasing agents on the formwork</p> <p>KB29. materials required for pre cast systems like tie bars, dowel bars, joint filers and sealing compounds</p> <p>KB30. curing process as per the specification / based on type of concreting works</p> <p>KB31. how to protect concrete surface from direct contact with sun and prevent damage</p> <p>KB32. basic details of pre cast systems like element thickness, element geometry and need for joint matching to ensure that the pre casted segments are as per requirement</p> <p>KB33. cleaning of moulds in precast</p> <p>KB34. various types of embedded parts like anchor cone, pipe sleeves, insert plates, and bolts</p> <p>KB35. importance of repairing concrete</p> <p>KB36. different type of defects in concrete</p> <p>KB37. different procedures for concrete repair</p> <p>KB38. appropriate technique for grinding of concrete surface for smooth finish</p> <p>KB39. tools used for grinding of concrete</p>
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CON/N0117

Place, level and finish concrete in various structural elements including repair works

	<p>KB40. appropriate technique for patching of concrete for repair</p> <p>KB41. different patching mortars and their mix proportions</p> <p>KB42. various admixtures and mortars present for repairing concrete</p>
Skills (S)	
A. Core Skills/ Generic Skills	Writing Skills
	The user/ individual on the job needs to know and understand how to: SA1. write in at least one language, preferably the local language at the site
	Reading Skills
	The user/ individual on the job needs to know and understand how to: SA2. read in one or more or more language, preferably the local language at the site SA3. read sketches provided by the supervisor If required SA4. read instructions, guidelines, sign boards, safety rules and safety tags SA5. read instructions and exit routes during emergency
	Oral Communication (Listening and Speaking skills)
	The user/ individual on the job needs to know and understand how to: SA6. speak in at least one language, preferably one of the local language at the site SA7. listen and follow instructions given by the superiors SA8. orally and effectively communicate with subordinates and coworkers
B. Professional Skills	Decision Making
	The user/individual on the job needs to know and understand how to: SB1. decide whether the work place is safe for working and also relevant task is not creating hazardous condition for others SB2. decide whether work is adequately defined for the day , work front is clear , and adequate materials and tools are available for performing work SB3. discontinue pouring of concrete in area of excess pour to level concrete uniformly SB4. identify and decide the appropriate compacting equipment
	Plan and Organise
	The user/individual on the job needs to know and understand how to: SB1. plan work and organize resources in coordination with team members and superiors
	Customer centricity
	The user/individual on the job needs to know and understand how to: SB2. complete work as per the agreed time schedule & quality
Problem solving	

CON/N0117

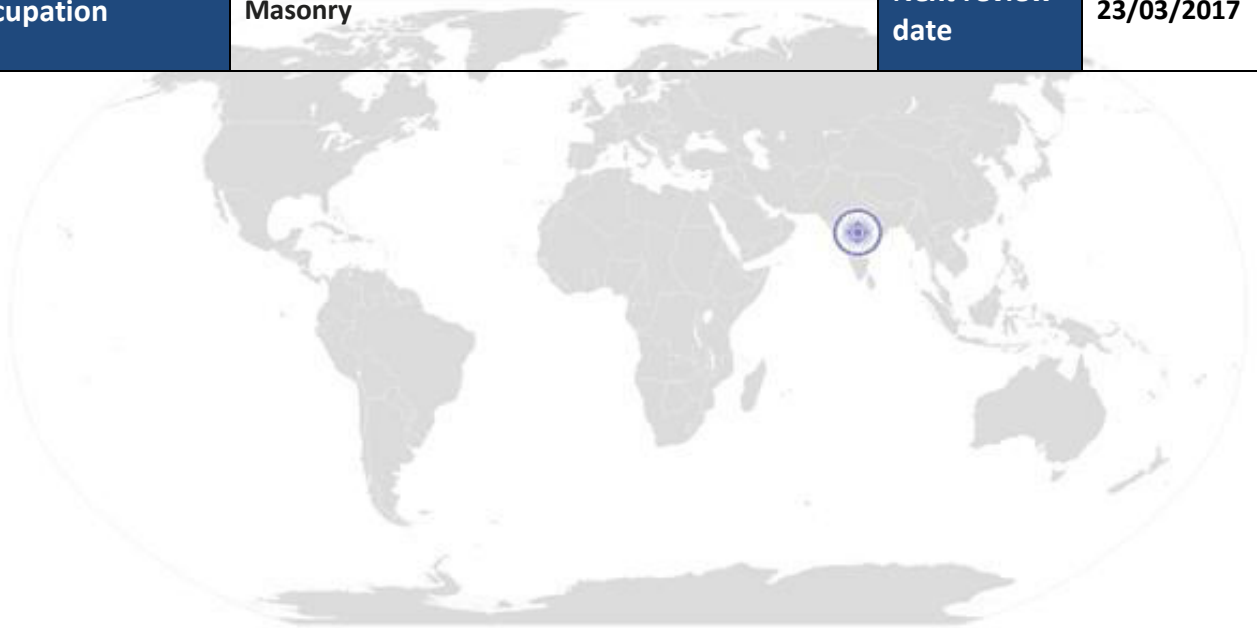
Place, level and finish concrete in various structural elements including repair works

	<p>The user/individual on the job needs to know and understand how to:</p> <ul style="list-style-type: none"> SB3. notify superiors any changes that may be required in formwork or reinforced bars placed prior to concreting SB4. avoid segregation of concrete SB5. resolve and solve any conflict within the team
	<p>Analytical Thinking</p>
	<p>The user/individual on the job needs to know and understand how to:</p> <ul style="list-style-type: none"> SB6. optimize resources efficiently SB5. minimize wastage in the workplace SB6. reconcile material consumption SB7. assess quantity and quality of materials for day work SB7. ensure estimation of starting and finishing levels for day work
	<p>Critical Thinking</p>
	<p>The user/individual on the job needs to know and understand how to:</p> <ul style="list-style-type: none"> SB8. evaluate the complexity of the task and seek assistance and support wherever required SB9. bring to the notice of the superiors any requirement of the requisite material and resources SB8. check for quality of scaffolding/working platform from all aspects of safety SB10. report to superiors incase of violation of any safety norms which may lead to accidents

CON/N0117 *Place, level and finish concrete in various structural elements including repair works*

NOS Version Control

NOS Code	CON/N0117		
Credits (NSQF)	TBD	Version number	1.0
Industry	Construction	Drafted on	07/03/2015
Industry Sub-sector	<ol style="list-style-type: none"> 1. Real Estate (Residential, Commercial & Institutional) 2. Infrastructure (Roads, Railways, Bridges, Runways & Industrial Units) 3. Power Generation (Hydro, Thermal & Nuclear) 	Last reviewed on	23/03/2015
Occupation	Masonry	Next review date	23/03/2017



CON/N8001

Work effectively in a team to deliver desired results at the workplace

National Occupational Standard



Overview

This NOS covers the skill and knowledge required to work effectively within a team to achieve the desired results.

CON/N8001

Work effectively in a team to deliver desired results at the workplace

National Occupational Standard

Unit Code	CON/N8001
Unit Title (Task)	Work effectively in a team to deliver desired results at the workplace
Description	This unit describes the skills and knowledge required to work effectively within a team to achieve the desired results.
Scope	<p>The scope covers the following:</p> <ul style="list-style-type: none"> Interact and communicate effectively with co-workers, superiors and subordinates across different teams Support co-workers, superiors and subordinates within the team and across interfacing teams to ensure effective execution of assigned task
Performance Criteria (PC) w.r.t. the Scope	
Element	Performance Criteria
Interact and communicate in effective and conclusive manner	<p>To be competent, the user / individual on the job must be able to:</p> <p>PC1. pass on work related information/ requirement clearly to the team members</p> <p>PC2. inform co-workers and superiors about any kind of deviations from work</p> <p>PC3. address the problems effectively and report if required to immediate supervisor appropriately</p> <p>PC4. receive instructions clearly from superiors and respond effectively on same</p> <p>PC5. communicate to team members/subordinates for appropriate work technique and method</p> <p>PC6. seek clarification and advice as per requirement and applicability</p>
Support co-workers to execute project requirements	<p>PC7. hand over the required material, tools tackles, equipment and work fronts timely to interfacing teams</p> <p>PC8. work together with co-workers in a synchronized manner</p>
Knowledge and Understanding (K)	
A. Organizational Context (Knowledge of the company / organization and its processes)	<p>The user/individual on the job needs to know and understand:</p> <p>KA1. own roles and responsibilities</p> <p>KA2. importance of effective communication and establishing strong working relationships with co-workers</p> <p>KA3. risks of a failure in teamwork in terms of effects on project outcomes, timelines, safety at the construction site, etc.</p> <p>KA4. different modes of communication, and its appropriate usage</p> <p>KA5. importance of creating healthy and cooperative work environment among the gangs of workers</p>
B. Technical Knowledge	<p>The user/individual on the job needs to know and understand:</p> <p>KB1. different activities within his work area where an interaction with other</p>

CON/N8001

Work effectively in a team to deliver desired results at the workplace

	<p>workers is required</p> <p>KB2. applicable techniques of work, properties of materials used, tools and tackles used, safety standards that co- workers might need as per the requirement</p> <p>KB3. importance of proper and effective communication and the expected adverse effects in case of failure relating to quality, timelines, safety, risks at the construction project site</p> <p>KB4. importance and need of supporting co-workers facing problems for smooth functioning of work</p>
Skills (S)	
A. Core Skills/ Generic Skills	Writing Skills
	<p>The user/ individual on the job needs to know and understand how to:</p> <p>SA9. write in one or more languages, preferably the local language at the site</p>
	Reading Skills
	<p>The user/ individual on the job needs to know and understand how to:</p> <p>SA10. read in one or more languages, preferably the local language at the site</p> <p>SA11. read communication from team members regarding work completed, materials used, tools and tackles used, support required</p>
	Oral Communication (Listening and Speaking skills)
<p>The user/ individual on the job needs to know and understand how to:</p> <p>SA12. speak in one or more languages, preferably one of the local language at the site</p> <p>SA13. listen and follow instructions / communication shared by superiors/ co-workers regarding team requirements or interfaces during work processes</p> <p>SA14. orally communicate with co-workers regarding support required to complete the respective work</p>	
B. Professional Skills	Decision Making
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SB11. decide on what information is to be shared with co-workers within the team or from interfacing gang of workers</p>
	Plan and Organise
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SB12. plan work and organize required resources in coordination with team members</p>
Customer centricity	

CON/N8001

Work effectively in a team to deliver desired results at the workplace

	The user/individual on the job needs to know and understand how to: SB13. complete all assigned task in coordination with team members
	Problem solving
	The user/individual on the job needs to know and understand how to: SB14. take initiative in resolving issues among co-workers or report the same to superiors
	Analytical Thinking
	The user/individual on the job needs to know and understand how to: SB15. ensure best ways of coordination among team members SB16. communicate with co-workers considering their educational/social background
	Critical Thinking
The user/individual on the job needs to know and understand how to: SB17. evaluate the complexity of task and determine if any guidance is required from superiors	



CON/N8001

Work effectively in a team to deliver desired results at the workplace

NOS Version Control

NOS Code	CON/N8001		
Credits (NSQF)	TBD	Version number	1.0
Industry	Construction	Drafted on	07/03/2015
Industry Sub-sector	<ol style="list-style-type: none"> 1. Real Estate (Residential, Commercial & Institutional) 2. Infrastructure (Roads, Railways, Bridges, Runways & Industrial Units) 3. Power Generation (Hydro, Thermal & Nuclear) 	Last reviewed on	23/03/2015
Occupation	Masonry	Next review date	23/03/2017



National Occupational Standard



Overview

This NOS covers the skills and knowledge required to plan and organize work in order to meet expected quality in established time frame.

CON/N8002

Plan and organize work to meet expected outcomes

National Occupational Standard

Unit Code	CON/N8002
Unit Title (Task)	Plan and organize work to meet expected outcomes
Description	This unit describes the knowledge and the skills required for an individual to plan and organize own work in order to meet expected outcome.
Scope	This scope covers the following: <ul style="list-style-type: none"> • Prioritize work activities to achieve desired results • Organize desired resources prior to commencement of work
Performance Criteria (PC) w.r.t. the Scope	
Element	Performance Criteria
Prioritize work activities to achieve desired results	To be competent, the user / individual on the job must be able to: PC1. understand clearly the targets and timelines set by superiors PC2. plan activities as per schedule and sequence PC3. provide guidance to the subordinates to obtain desired outcome PC4. plan housekeeping activities prior to and post completion of work
Organize desired resources prior to commencement of work	PC5. list and arrange required resources prior to commencement of work PC6. select and employ correct tools, tackles and equipment for completion of desired work PC7. complete the work with allocated resources PC8. engage allocated manpower in an appropriate manner PC9. use resources in an optimum manner to avoid any unnecessary wastage PC10. employ tools, tackles and equipment with care to avoid damage to the same PC11. organize work output, materials used, tools and tackles deployed, PC12. processes adopted to be in line with the specified standards and instructions
Knowledge and Understanding (K)	
A. Organizational Context (Knowledge of the company / organization and its processes)	The user/individual on the job needs to know and understand: KA1. importance of proper housekeeping KA2. policies, procedures and work targets set by superiors KA3. roles and responsibilities in executing the work for subordinates and self
B. Technical Knowledge	The user/individual on the job needs to know and understand: KB1. standard practices of work to be adopted for assigned task KB2. how to use available resources in a judicious and appropriate manner to minimize wastages or damage
Skills (S)	

CON/N8002

Plan and organize work to meet expected outcomes

A. Core Skills/ Generic Skills	Writing Skills
	The user/ individual on the job needs to know and understand how to: SA1. write in one or more language, preferably the local language at the site SA2. list out the assigned works and targets
	Reading Skills
	The user/ individual on the job needs to know and understand how to: SA3. read in one or more language, preferably the local language at the site SA4. read communication from co-workers, superiors and notices from other departments as per requirement of the level
	Oral Communication (Listening and Speaking skills)
	The user/ individual on the job needs to know and understand how to: SA5. speak in one or more language, preferably one of the local language at the site SA6. listen and follow communication shared by co-workers regarding standard work processes, resources available, timelines, etc. SA7. communicate effectively with co-workers and subordinates
	B. Professional Skills
The user/individual on the job needs to know and understand how to: SB1. decide on what sequence is to be adopted for execution of work	
Plan and Organise	
The user/individual on the job needs to know and understand how to: SB2. plan and organize the materials, tools, tackles and equipment required to execute the work	
Customer centricity	
The user/individual on the job needs to know and understand how to: SB3. complete all assigned task with proper planning and organizing	
Problem solving	
The user/individual on the job needs to know and understand how to: SB4. arrange or seek help to arrange for material, tools and tackles in case of shortfall	
Analytical Thinking	
The user/individual on the job needs to know and understand how to: SB5. analyze areas of work which could result in a delay of work, wastage of material or damage to tools and tackles	
Critical Thinking	

CON/N8002

Plan and organize work to meet expected outcomes

	<p>The user/individual on the job needs to know and understand how to:</p> <p>SB6. evaluate potential solutions to minimize avoidable delays and wastages at the construction site</p>
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CON/N8002

Plan and organize work to meet expected outcomes

NOS Version Control

NOS Code	CON/N8002		
Credits (NSQF)	TBD	Version number	1.0
Industry	Construction	Drafted on	07/03/2015
Industry Sub-sector	<ol style="list-style-type: none"> 1. Real Estate (Residential, Commercial & Institutional) 2. Infrastructure (Roads, Railways, Bridges, Runways & Industrial Units) 3. Power Generation (Hydro, Thermal & Nuclear) 	Last reviewed on	23/03/2015
Occupation	Masonry	Next review date	23/03/2017



CON/N9001 Work according to personal health, safety and environment protocol at construction site

National Occupational Standard



Overview

This NOS covers the skill and knowledge required for an individual to work according to personal health, safety and environmental protocol at construction site.

CON/N9001 Work according to personal health, safety and environment protocol at construction site

National Occupational Standard	Unit Code	CON/N9001
	Unit Title (Task)	Work according to personal health, safety and environment protocol at construction site
	Description	This NOS covers the skill and knowledge required for an individual to work according to personal health, safety and environmental protocol at construction site
	Scope	<p>The scope covers the following:</p> <ul style="list-style-type: none"> Follow safety norms as defined by organization Adopt healthy & safe work practices Implement good housekeeping and environment protection process and activities
	Performance Criteria (PC) w.r.t. the Scope	
	Element	Performance Criteria
	Follow safety norms as defined by organization	<p>To be competent, the user / individual on the job must be able to:</p> <p>PC1. identify and report any hazards, risks or breaches in site safety to the appropriate authority</p> <p>PC2. follow emergency and evacuation procedures in case of accidents, fires, natural calamities</p> <p>PC3. follow recommended safe practices in handling construction materials, including chemical and hazardous material whenever applicable</p> <p>PC4. participate in safety awareness programs like Tool Box Talks, safety demonstrations, mock drills, conducted at site</p> <p>PC5. identify near miss , unsafe condition and unsafe act</p>
	Adopt healthy & safe work practices	<p>PC6. use appropriate Personal Protective Equipment (PPE) as per work requirements including:</p> <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) <p>PC7. handle all required tools, tackles , materials & equipment safely</p> <p>PC8. follow safe disposal of waste, harmful and hazardous materials as per EHS guidelines</p> <p>PC9. install and apply properly all safety equipment as instructed</p> <p>PC10. follow safety protocol and practices as laid down by site EHS department</p>

CON/N9001 Work according to personal health, safety and environment protocol at construction site

<p>Implement good housekeeping practices</p>	<p>PC11. collect and deposit construction waste into identified containers before disposal, separate containers that may be needed for disposal of toxic or hazardous wastes</p> <p>PC12. apply ergonomic principles wherever required</p>
<p>Knowledge and Understanding (K)</p>	
<p>A. Organizational Context (Knowledge of the company / organization and its processes)</p>	<p>The user/individual on the job needs to know and understand:</p> <p>KA1. reporting procedures in cases of breaches or hazards for site safety, accidents, and emergency situations as per guidelines</p> <p>KA2. types of safety hazards at construction sites</p> <p>KA3. basic ergonomic principles as per applicability</p>
<p>B. Technical Knowledge</p>	<p>The user/individual on the job needs to know and understand:</p> <p>KB1. the procedure for responding to accidents and other emergencies at site</p> <p>KB2. appropriate personal protective equipment to used based on various working conditions</p> <p>KB3. importance of handling tools, equipment and materials as per applicable</p> <p>KB4. health and environments effect of construction materials as per applicability</p> <p>KB5. various environmental protection methods as per applicability</p> <p>KB6. storage of waste including the following at appropriate location:</p> <ul style="list-style-type: none"> • non-combustible scrap material and debris • combustible scrap material and debris • general construction waste and trash (non-toxic, non-hazardous) • any other hazardous wastes • any other flammable wastes <p>KB7. how to use hazardous material, in a safe and appropriate manner as per applicability</p> <p>KB8. safety relevant to tools, tackles, & requirement as per applicability</p> <p>KB9. housekeeping activities relevant to task</p>
<p>Skills (S)</p>	
<p>A. Core Skills/ Generic Skills</p>	<p>Writing Skills</p>
	<p>The user/ individual on the job needs to know and understand how to:</p> <p>SA1. write in one or more language, preferably the local language at the site</p> <p>SA2. fill safety formats for near miss, unsafe conditions and safety suggestions</p>
	<p>Reading Skills</p>
	<p>The user/ individual on the job needs to know and understand how to:</p> <p>SA3. read in one or more language, preferably the local language at the site</p> <p>SA4. read sign boards, notice boards relevant to safety</p>

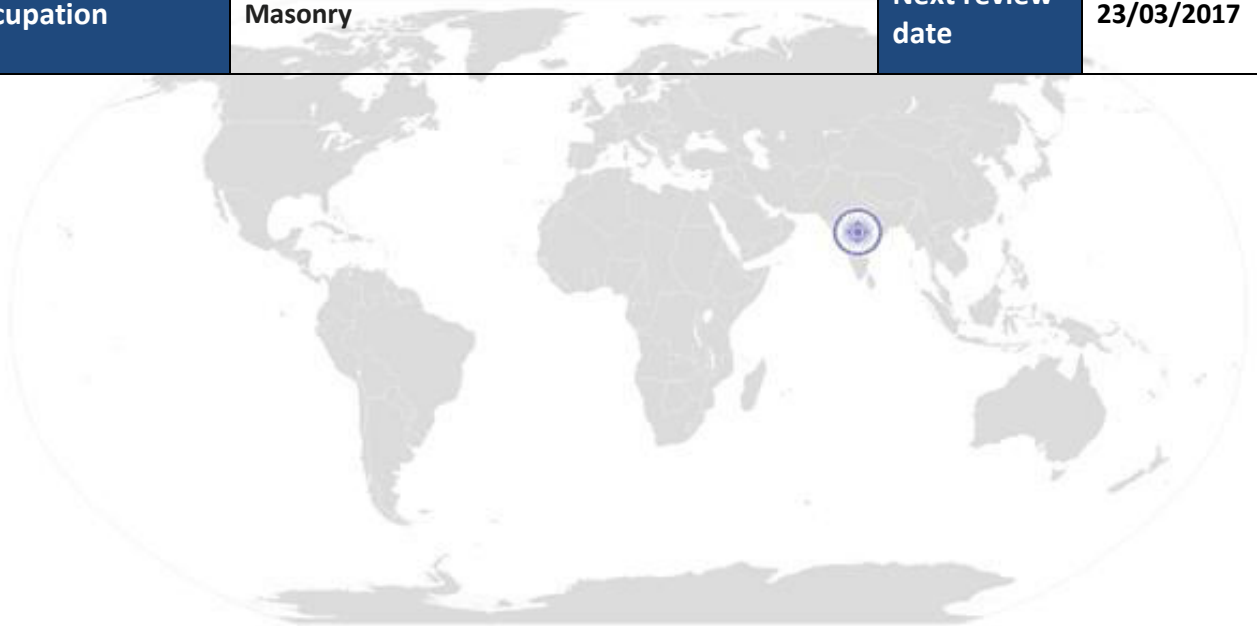
CON/N9001 Work according to personal health, safety and environment protocol at construction site

	Oral Communication (Listening and Speaking skills)
	The user/ individual on the job needs to know and understand how to: SA5. speak in one or more language, preferably one of the local language at the site SA6. listen instructions / communication shared by site EHS and superiors regarding site safety, and conducting tool box talk SA7. communicate reporting of site conditions, hazards, accidents, etc.
B. Professional Skills	Decision Making
	The user/individual on the job needs to know and understand how to: SB1. not create unsafe conditions for others SB2. keep the workplace clean and tidy
	Plan and Organise
	N.A
	Customer centricity
	N.A
	Problem solving
	The user/individual on the job needs to know and understand how to: SB3. identify safety risks that affect the health, safety and environment for self and others working in the vicinity, tackle it if within limit or report to appropriate authority
	Analytical Thinking
	The user/individual on the job needs to know and understand how to: SB4. assess and analyze areas which may affect health, safety and environment protocol on the site
Critical Thinking	
The user/individual on the job needs to know and understand how to: SB5. ensure personal safety behavior SB6. respond to emergency	

CON/N9001 Work according to personal health, safety and environment protocol at construction site

NOS Version Control

NOS Code	CON/N9001		
Credits (NSQF)	TBD	Version number	1.0
Industry	Construction	Drafted on	07/03/2015
Industry Sub-sector	<ol style="list-style-type: none"> 1. Real Estate(Residential, Commercial &Institutional) 2. Infrastructure (Roads, Railways, Bridges, Runways &Industrial Units) 3. Power Generation (Hydro, Thermal & Nuclear) 	Last reviewed on	23/03/2015
Occupation	Masonry	Next review date	23/03/2017



Assessment Criteria for Mason Concrete

CRITERIA FOR ASSESSMENT OF TRAINEES

<u>Job Role</u>	Mason Concrete
<u>Qualification Pack</u>	CON/Q0104
<u>Sector Skill Council</u>	Construction

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 theory part will be based on knowledge bank of questions created by the SSC
3. Individual assessment agencies will create unique question papers for theory part for each candidate at each examination/training center (as per assessment criteria below).
4. Individual assessment agencies will create unique evaluations for skill practical for every student at each examination/training center based on this criteria.
5. To pass the Qualification Pack, every trainee should score a minimum of 70% individually in theory and practical for every NOS.
6. The trainee should score 100% marks individually in theory and practical for safety related NOS and performances criteria as and where applicable in each qualification pack.
7. The Assessor shall check the final outcome of the practices while evaluating the steps performed to achieve the final outcome.
8. 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.
9. After the certain number of iteration as decided by SSC the trainee is marked as fail, scoring zero marks for the procedure in the activity (practical's).
10. 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.

				Marks Allocation	
		Total Mark	Out Of	Theory	Skills Practical
CON/N0114: Carry out IPS / Tremix flooring works	PC1. inspect the work area prior to concreting, ensure leveling incase of any undulations observed on the surface prior to concreting	100	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		2.5	0.5	2

Assessment Criteria for Mason Concrete

	for reinforcement is provided			
	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
	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	5	1	4

Assessment Criteria for Mason Concrete

	through vacuum de-watering machines				
	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/N0117: Place, level and finish concrete, both RCC and PCC, in various structural elements – in situ and pre cast	PC1. inspect the area for completion of housekeeping works and remove any undulations on the surface prior to concreting	100	1.25	0.25	1
	PC2. ensure surface is prepared appropriately and report any deviation in slope and alignment		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		1.25	0.25	1
	PC5. notify superiors for detrimental quality of concrete		1.25	0.25	1
	PC6. visually assess the concrete mix for usability and workability		1.25	0.25	1
	PC7. check the type , grade of cement and visual soundness of cement prior to use		2.5	0.5	2
	PC8. check and ensure sieved fine aggregate prior to use		2.5	0.5	2
	PC9. instruct and ensure that mixing of concrete is in specified ratio		5	1	4
	PC10. handle and adjust the pouring equipments as per requirements		2.5	0.5	2
	PC11. ensure standard pouring height for concrete is maintained throughout pouring		2.5	0.5	2
	PC12. ensure pouring of concrete takes place in specified layers		2.5	0.5	2
	PC13. pour concrete to maintain specified levels & cover for steel reinforcement		5	1	4
	PC14. apply vibrator within influence depth and as per standard procedures		4	1	3
	PC15. ensure that the vibrator does not touch the reinforcement or is not applied to the face of the form		3.5	0.5	3

Assessment Criteria for Mason Concrete

PC16. screed the concrete as per requirements using appropriate tools and technique	2.25	.25	2
PC17. push the excess concrete towards the formwork for easy removal	1.25	.25	1
PC18. float the concrete using appropriate tools	1.5	.5	1
PC19. level the edges and corners as per requirements using appropriate tools for semi-finished concrete		.25	1
PC20. provide construction/ control joints in concrete surface at pre-defined locations	2.5	.5	2
PC21. cut construction joints as per specification and requirements	1.25	.25	1
PC22. smoothen the surface using appropriate tools, to ensure a consistent and durable final finish	1.25	.25	1
PC23. apply a final finish on the surface as per requirements using any of the following major techniques: <ul style="list-style-type: none"> • Stamped concrete finish • Stenciling concrete finish • Broom finish • Rock salt finish 	3.75	.75	3
PC24. provide shear key /vertical construction joint or cut construction joint as per requirement	1.25	.25	1
PC25. ensure cleaning and removal of spilled concrete is carried out after work	1.25	.25	1
PC26. ensure proper curing of concrete by marking and monitoring of the curing time	1.25	.25	1
PC27. ensure proper barricading of the concrete area and prevent any damage to the poured concrete	1.25	.25	1
PC28. inspect the area for completion of housekeeping works and remove any debris from the surface prior to concreting	1.5	0.5	1
PC29. report any gaps in formwork/moulds to avoid leakage	1.5	0.5	1
PC30. report any misalignment in formwork/reinforcement	1.5	0.5	1
PC31. check that cover for reinforcement is provided properly	1.25	0.25	1
PC32. point out any inadequacy in application of release agent	1.25	0.25	1
PC33. comply with the sequence of pour during concreting	2.5	0.5	2
PC34. pour concrete appropriately and as per system requirements in pre cast moulds	2.5	0.5	2
PC35. carry out vibration of the concrete using internal/external vibrators as per applicability	3.5	0.5	3

Assessment Criteria for Mason Concrete

	PC36. ensure all embedded parts are intact during vibration		2.25	0.25	2
	PC37. ensure pre cast segment surface is finished as per specification		2.25	0.25	2
	PC38. identify the type of defect on the concrete surface such as: <ul style="list-style-type: none"> • air holes/voids • bulges • offset between joints • honeycombing 		3.5	0.5	3
	PC39. notify superiors for type of defect and repair required		1.25	0.25	1
	PC40. ensure repair work is carried out only under the knowledge of superiors		1.25	0.25	1
	PC41. prepare a suitable mortar for filling the air holes/voids		2.25	0.25	2
	PC42. apply the mortar and rub using carborundum stone to obtain a flushed & smooth surface		2.5	0.5	2
	PC43. carry out chipping of the surface to remove bulges and offsets as per requirement		2.5	0.5	2
	PC44. carry out surface grinding to remove bulges and irregularities in concrete surface using sander / grinder		2.5	0.5	2
	PC45. ensure grinding is performed within acceptable levels		1.5	0.5	1
	PC46. fill narrow / wide cracks in concrete using appropriate filler / compounds		1.5	0.5	1
	PC47. ensure proper curing of repaired structure along with proper blending with the adjacent structure		1.25	0.25	1
		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
	PC8. work together with co-workers in a synchronized manner		30	6	24

Assessment Criteria for Mason Concrete

		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
CON/N9001: Work according to personal health, safety and environment protocol at construction site	PC1. identify and report any hazards, risks or breaches in site safety to the appropriate authorities	100	5	1	4
	PC2. follow emergency and evacuation procedures in case of accidents, fires, natural calamities		5	1	4
	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 		10	2	8

Assessment Criteria for Mason Concrete

	<ul style="list-style-type: none"> • Hand and Body Protection • Respiratory Protection (if required) 				
	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