



Qualification Pack



Helper Electrician

QP Code: CON/Q0601

Version: 1.1

NSQF Level: 2

Construction Skill Development Council of India || CPB 103 & 104 (1st Floor), Block 4B, DLF Corporate Park, Phase III, MG Road Gurgaon-122002



Qualification Pack

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CON/Q0601: Helper Electrician

Brief Job Description

The job role is responsible for helping and performing tasks under instructions and close supervision. The responsibilities also include identification and handling of tools, devices and materials used to perform electrical works and performance of preparatory works prior to temporary and permanent electrical installations. The individual should have basic knowledge in the environment, health & safety aspects relevant to the trade.

Personal Attributes

This job require individual to work at site as a Helper Electrician where he needs to be physically fit and mentally alert to withstand working in a difficult and tough construction environment while responding to the needs and requirements of the tasks. He should be extra safety conscious. He should be aware of the electrical and general work safety norms applicable to the construction sites.

Applicable National Occupational Standards (NOS)

Compulsory NOS:

1. [CON/N0101: Erect and dismantle temporary scaffold of 3.6 meter height](#)
2. [CON/N0104: Carry out manual earthwork at construction site](#)
3. [CON/N0606: Identify and handle different tools, measuring devices and materials relevant to LV electrical works](#)
4. [CON/N0607: Carry out wall chasing and external threading on MS conduit](#)
5. [CON/N8001: Work effectively in a team to deliver desired results at the workplace](#)
6. [CON/N9001: Work according to personal health, safety and environment protocol at construction site](#)

Qualification Pack (QP) Parameters

Sector	Construction
Sub-Sector	Real Estate and Infrastructure construction
Occupation	Construction Electrical Works
Country	India



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NSQF Level	2
Aligned to NCO/ISCO/ISIC Code	NCOâ€¢2004/9313.90
Minimum Educational Qualification & Experience	10th Class with 0-6 Months of experience in case of a Non trained worker, : construction site experience
Minimum Level of Education for Training in School	
Pre-Requisite License or Training	Recommended training period of 6-8 weeks as per QP of Helper Electrician
Minimum Job Entry Age	18 Years
Last Reviewed On	23/05/2015
Next Review Date	31/03/2022
NSQC Approval Date	21/07/2016
Version	1.1
Reference code on NQR	2016/CON/CSDCI/01534
NQR Version	1.0



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CON/N0101: Erect and dismantle temporary scaffold of 3.6 meter height

Description

This unit describes the skills and knowledge required to erect and dismantle 3.6 meter temporary scaffold

Elements and Performance Criteria

Erect and dismantle temporary scaffold of 3.6 meter height

To be competent, the user/individual on the job must be able to:

- PC1.** level area where scaffold need to be erected and check for ground compactness if required
- PC2.** shift and stack required materials, components, tools and tackles at the instructed location
- PC3.** wear and use required safety gadgets and follow trade safety
- PC4.** place base plates and sole boards on the ground as per markings and instructions
- PC5.** use proper components and follow standard procedure for 3.6 m temporary scaffold erection
- PC6.** check verticality of scaffold at first level of erection and correct (if required) before moving to the next level
- PC7.** check for rigidity, stability and support of erected scaffold
- PC8.** fix walk-boards, guard rails, toe-boards and other components on working platform
- PC9.** follow standard procedure for dismantling of 3.6 m temporary scaffold
- PC10.** remove guard rails, toe boards, walk boards and other components sequentially
- PC11.** clean and stack all components properly after dismantling
- PC12.** maintain tidiness at work location

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** standard procedure for scaffolding works
- KU2.** safety rules and regulations for handling and storing scaffolding tools,
- KU3.** personal protection including use of safety gears and equipment
- KU4.** request procedure for tools & materials
- KU5.** housekeeping & other administrative rules
- KU6.** use of different types of scaffolds (cup-lock , frame scaffold)
- KU7.** use of tools and tackles in scaffolding works
- KU8.** identification and use of different components
- KU9.** use of tools for measurements and marking
- KU10.** basic arithmetic calculation
- KU11.** units of measurements
- KU12.** standard size of scaffolding components
- KU13.** personal protective equipment for safety
- KU14.** importance of housekeeping



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- KU15.** standard procedure for erection and dismantling of 3.6 m temporary scaffold
- KU16.** tools and equipment used for erecting and dismantling 3.6 meter temporary scaffold

Generic Skills (GS)

User/individual on the job needs to know how to:

- GS1.** write in one or more language, preferably in the local language of the site
- GS2.** read one or more language, preferably the local language of the site
- GS3.** read instructions, guidelines, sign boards, safety rules & safety tags
- GS4.** speak in one or more language, preferably in one of the local languages of site
- GS5.** listen and follow instructions / communication shared by superiors/ co- workers regarding team requirements or interfaces during work processes
- GS6.** orally communicate with co-workers regarding support required to complete the respective work
- GS7.** decide whether the workplace is safe for working and also whether the
- GS8.** identify and organize right scaffolding materials
- GS9.** identify and use relevant tools effectively
- GS10.** complete work as per agreed time and quality
- GS11.** minimize wastages
- GS12.** revert to superior for selection/sorting of materials
- GS13.** identify location at which violation of any safety norms may lead to accidents



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Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Erect and dismantle temporary scaffold of 3.6 meter height</i>	20	80	-	-
PC1. level area where scaffold need to be erected and check for ground compactness if required	2	8	-	-
PC2. shift and stack required materials, components, tools and tackles at the instructed location	2	8	-	-
PC3. wear and use required safety gadgets and follow trade safety	2	8	-	-
PC4. place base plates and sole boards on the ground as per markings and instructions	2	8	-	-
PC5. use proper components and follow standard procedure for 3.6 m temporary scaffold erection	2	8	-	-
PC6. check verticality of scaffold at first level of erection and correct (if required) before moving to the next level	2	8	-	-
PC7. check for rigidity, stability and support of erected scaffold	1	4	-	-
PC8. fix walk-boards, guard rails, toe-boards and other components on working platform	2	8	-	-
PC9. follow standard procedure for dismantling of 3.6 m temporary scaffold	2	8	-	-
PC10. remove guard rails, toe boards, walk boards and other components sequentially	1	4	-	-
PC11. clean and stack all components properly after dismantling	1	4	-	-
PC12. maintain tidiness at work location	1	4	-	-
NOS Total	20	80	-	-



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National Occupational Standards (NOS) Parameters

NOS Code	CON/N0101
NOS Name	Erect and dismantle temporary scaffold of 3.6 meter height
Sector	Construction
Sub-Sector	Generic
Occupation	Generic
NSQF Level	2
Credits	TBD
Version	1.1
Last Reviewed Date	23/05/2015
Next Review Date	31/03/2022
NSQC Clearance Date	21/07/2016



Qualification Pack

CON/N0104: Carry out manual earthwork at construction site

Description

This unit describes the skills and knowledge required to carry out manual earthwork at construction sites

Scope

The scope covers the following:

- Carry out preparatory work prior to earthwork
- Carry out soil cutting, dressing work
- Carry out backfilling and compaction manually

Elements and Performance Criteria

Carry out preparatory work prior to earthwork

To be competent, the user/individual on the job must be able to:

- PC1.** remove all the unwanted materials, organic substances, manually removable objects from the worksite using appropriate hand tools as per instruction
- PC2.** clean earth surface using proper hand tools to make it ready for carrying out marking activity
- PC3.** carry out marking for excavation using lime, wooden pegs, ropes or by any other suitable materials as per instruction
- PC4.** shift and stack fencing/ barricading materials, safety signage, ladders, ropes, earth cutting and shifting tools at specified locations as per instruction

Carry out soil cutting, dressing work

To be competent, the user/individual on the job must be able to:

- PC5.** dig earth to a desired depth using appropriate tools as per instruction
- PC6.** maintain desired slope of earth during digging activity
- PC7.** dispose earth from the excavated pit by using suitable tools and equipments such as spade , wheel barrows, pans as per instruction
- PC8.** check for loose material, soil lumps, pebbles on achieving the desired earth level
- PC9.** carry out surface dressing work by disposing loose material, gravels, plant roots, sludge, muck or debris as per requirement to the appropriate locations
- PC10.** carry out compaction of the base layer of the pit by ramming or operating hand/ plate compactor as per instruction

Carry out backfilling and compaction manually

To be competent, the user/individual on the job must be able to:

- PC11.** shift and place earth at desired location by using right tools as per instruction
- PC12.** sort gravels or oversized aggregates from soil to be used for backfilling as per instruction
- PC13.** place and spread earth maintaining uniform layers within tolerance limit of thickness
- PC14.** sprinkle water as uniformly over the layer to be compacted as and when required as per direction



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- PC15.** carry out ramming or operate hand/ plate compacting machines over the soil layer as per direction
- PC16.** carry out re-filling and compaction of excavated trenches, pits surrounding the structures or at necessary location by soil under supervision

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** general safety rules applicable to different activities related to construction
- KU2.** administrative rules and regulations applicable to construction sites
- KU3.** material issue and return procedure at site
- KU4.** reporting procedures relevant to own job, unsafe/ hazardous conditions
- KU5.** use and name of hand tools such as spade, pick axe, shovel, pans, wheel
- KU6.** working at depth at below ground level
- KU7.** use of marking tools such as wooden pegs, lime, line threads, ropes
- KU8.** use of plate compactor, hand roller, earth ramming tools etc
- KU9.** how to maintain slope in excavation
- KU10.** use of ladder to access earth pits
- KU11.** safety related to earthwork

Generic Skills (GS)

User/individual on the job needs to know how to:

- GS1.** write in at least one language, preferably in the local language of the site
- GS2.** read in one or more languages, preferably in the local language of the site
- GS3.** read instructions, guidelines, sign boards, safety rules & safety tags instruction related to exit routes during emergency at the workplace
- GS4.** speak in one or more languages, preferably in one of the local languages of the site
- GS5.** listen and follow instructions / communication shared by superiors/ co- workers regarding team requirements or interfaces during work processes
- GS6.** orally communicate with co-workers regarding support required to complete the respective work
- GS7.** decide on tools to be used at different activities involved in manual
- GS8.** sequence activities to be carried out
- GS9.** decide whether his workplace is safe for working and also his work is not creating hazardous conditions for other
- GS10.** identify and use the tools
- GS11.** identify and use of all safety equipment
- GS12.** arrange the material for earthwork
- GS13.** complete work as per time schedule and quality
- GS14.** determine any violation from organizational and standard safety norms



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Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Carry out preparatory work prior to earthwork</i>	4	16	-	-
PC1. remove all the unwanted materials, organic substances, manually removable objects from the worksite using appropriate hand tools as per instruction	1	4	-	-
PC2. clean earth surface using proper hand tools to make it ready for carrying out marking activity	1	4	-	-
PC3. carry out marking for excavation using lime, wooden pegs, ropes or by any other suitable materials as per instruction	1	4	-	-
PC4. shift and stack fencing/ barricading materials, safety signage, ladders, ropes, earth cutting and shifting tools at specified locations as per instruction	1	4	-	-
<i>Carry out soil cutting, dressing work</i>	9	36	-	-
PC5. dig earth to a desired depth using appropriate tools as per instruction	2	8	-	-
PC6. maintain desired slope of earth during digging activity	2	8	-	-
PC7. dispose earth from the excavated pit by using suitable tools and equipments such as spade , wheel barrows, pans as per instruction	1	4	-	-
PC8. check for loose material, soil lumps, pebbles on achieving the desired earth level	1	4	-	-
PC9. carry out surface dressing work by disposing loose material, gravels, plant roots, sludge, muck or debris as per requirement to the appropriate locations	1	4	-	-
PC10. carry out compaction of the base layer of the pit by ramming or operating hand/ plate compactor as per instruction	2	8	-	-
<i>Carry out backfilling and compaction manually</i>	7	28	-	-



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Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC11. shift and place earth at desired location by using right tools as per instruction	2	8	-	-
PC12. sort gravels or oversized aggregates from soil to be used for backfilling as per instruction	1	4	-	-
PC13. place and spread earth maintaining uniform layers within tolerance limit of thickness	1	4	-	-
PC14. sprinkle water as uniformly over the layer to be compacted as and when required as per direction	1	4	-	-
PC15. carry out ramming or operate hand/ plate compacting machines over the soil layer as per direction	1	4	-	-
PC16. carry out re-filling and compaction of excavated trenches, pits surrounding the structures or at necessary location by soil under supervision	1	4	-	-
NOS Total	20	80	-	-



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National Occupational Standards (NOS) Parameters

NOS Code	CON/N0104
NOS Name	Carry out manual earthwork at construction site
Sector	Construction
Sub-Sector	Generic
Occupation	Generic
NSQF Level	2
Credits	TBD
Version	1.1
Last Reviewed Date	23/05/2015
Next Review Date	31/03/2022
NSQC Clearance Date	21/07/2016



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CON/N0606: Identify and handle different tools, measuring devices and materials relevant to LV electrical works

Description

This unit describes the skills and knowledge required to identify and handle different tools, measuring devices and materials relevant to LV electrical works

Scope

The scope covers the following:

- Identify and handle tools, accessories and electrical devices
- Identify and handle material and fixtures relevant to LV electrical works

Elements and Performance Criteria

Identify and handle tools, accessories and electrical devices

To be competent, the user/individual on the job must be able to:

- PC1.** identify and use different hand tools like screw driver, pliers, wire strippers, voltage testers, insulation tapes, hacksaw and other tools relevant to LV electrical works
- PC2.** identify and use power tools like drill machine, hand cutting machine, hand grinding machine required to carry out LV electrical installation work
- PC3.** use measuring tape, plumb bob, spirit level, line thread and other relevant hand tools for carrying out checks in alignment of works
- PC4.** identify common electrical measuring devices like multimeter, earth tester, tong tester and megger required to undertake LV electrical tests/ inspections
- PC5.** identify common construction equipments like steel cutting & bending machine, welding machine, vibrators, pumps, motors, tower cranes, batching plants etc
- PC6.** identify safety tools and equipments like sand bucket, fire extinguisher, PPEs, barricading, signage, symbols used at construction sites

Identify and handle material and fixtures relevant to LV electrical works

To be competent, the user/individual on the job must be able to:

- PC7.** identify electrical materials and fixtures like wires, cables, conduits, clamps, lights, circuit breakers, switches, sockets, starters and related accessories
- PC8.** check for breakages, cracks, damp, corrosions etc. to electrical materials and fixtures prior to using
- PC9.** shift lights, cables, conduits, cable trays, brackets, DBs, ladders and other relevant materials to the appropriate work locations as per directions
- PC10.** inspect material storage locations for safe condition which include avoiding vicinity of water, fire, direct sunlight, service lines, existing electrical lines, ongoing construction works causing fall of material etc
- PC11.** store and stack electrical materials at work locations as per instruction or standard practices
- PC12.** provide protective cover, erect barricading, signage around the stacked materials adequately as per instructions



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PC13. carry out housekeeping at work locations before and after completion of work

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** general and electrical safety rules applicable to different activities at construction works
- KU2.** administrative rules and regulations applicable to construction sites
- KU3.** material issue and return procedure at site
- KU4.** reporting procedures relevant to own job, unsafe/ hazardous conditions
- KU5.** area of use of common electrical hand and power tools like screw drivers, wire cutters, wire strippers, pliers, hammers, hacksaws, chisels, spanners, wrenches etc.
- KU6.** area of use of measuring devices like ammeter, earth tester, tong tester, megger etc.
- KU7.** types of cables, wires, conduits and their respective uses at LV electrical connections
- KU8.** common types of fixtures like switches, brackets, sockets, plugs, tops and their respective areas of usage
- KU9.** types of circuit breakers, starters, relays and their areas of use
- KU10.** physical and chemical properties of good conductor, semi-conductor and bad conductor materials
- KU11.** basic concept of electrical current flow and factors which influence electrical flows through conductor
- KU12.** standard practice of material handling and storing at workplace
- KU13.** use of appropriate fire safety measures like sand bucket, fire extinguisher, goggles, gloves etc. as per requirement
- KU14.** use of measuring equipments like measuring tape, plumb bob, level tube/pipe, marking tools etc. and their respective areas of use

Generic Skills (GS)

User/individual on the job needs to know how to:

- GS1.** write in one or more languages, preferably in the local language of the site
- GS2.** read in at least two languages, preferably in the local language of the site and basic English
- GS3.** read and interpret safety sign boards, signage, tags etc. provided at workplace
- GS4.** prepare basic status updates for the superiors in the prescribed format
- GS5.** listen and follow instructions / communication shared by superiors/ coworkers regarding team requirements or interfaces during work processes
- GS6.** orally communicate with co-workers regarding support required to complete the respective work
- GS7.** decide on tools to be used at different activities involved in manual earthwork
- GS8.** sequence activities to be carried out on site
- GS9.** identify and use the tools
- GS10.** identify and use of all safety equipment



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- GS11.** arrange the material for earthwork
- GS12.** complete work in time as per instructions
- GS13.** determine any violation from organizational and standard safety norms



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Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Identify and handle tools, accessories and electrical devices</i>	10	40	-	-
PC1. identify and use different hand tools like screw driver, pliers, wire strippers, voltage testers, insulation tapes, hacksaw and other tools relevant to LV electrical works	2	8	-	-
PC2. identify and use power tools like drill machine, hand cutting machine, hand grinding machine required to carry out LV electrical installation work	2	8	-	-
PC3. use measuring tape, plumb bob, spirit level, line thread and other relevant hand tools for carrying out checks in alignment of works	2	8	-	-
PC4. identify common electrical measuring devices like multimeter, earth tester, tong tester and megger required to undertake LV electrical tests/ inspections	2	8	-	-
PC5. identify common construction equipments like steel cutting & bending machine, welding machine, vibrators, pumps, motors, tower cranes, batching plants etc	1	4	-	-
PC6. identify safety tools and equipments like sand bucket, fire extinguisher, PPEs, barricading, signage, symbols used at construction sites	1	4	-	-
<i>Identify and handle material and fixtures relevant to LV electrical works</i>	10	40	-	-
PC7. identify electrical materials and fixtures like wires, cables, conduits, clamps, lights, circuit breakers, switches, sockets, starters and related accessories	2	8	-	-
PC8. check for breakages, cracks, damp, corrosions etc. to electrical materials and fixtures prior to using	1	4	-	-
PC9. shift lights, cables, conduits, cable trays, brackets, DBs, ladders and other relevant materials to the appropriate work locations as per directions	1	4	-	-



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Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC10. inspect material storage locations for safe condition which include avoiding vicinity of water, fire, direct sunlight, service lines, existing electrical lines, ongoing construction works causing fall of material etc	1	4	-	-
PC11. store and stack electrical materials at work locations as per instruction or standard practices	2	8	-	-
PC12. provide protective cover, erect barricading, signage around the stacked materials adequately as per instructions	2	8	-	-
PC13. carry out housekeeping at work locations before and after completion of work	1	4	-	-
NOS Total	20	80	-	-



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National Occupational Standards (NOS) Parameters

NOS Code	CON/N0606
NOS Name	Identify and handle different tools, measuring devices and materials relevant to LV electrical works
Sector	Construction
Sub-Sector	Real Estate and Infrastructure construction
Occupation	Construction Electrical Works
NSQF Level	2
Credits	TBD
Version	1.1
Last Reviewed Date	23/05/2015
Next Review Date	31/03/2022
NSQC Clearance Date	21/07/2016



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CON/N0607: Carry out wall chasing and external threading on MS conduit

Description

This unit describes the skills and the knowledge required to carry out wall chasing and external threading on MS conduit

Scope

The scope covers the following:

- Carry out preparatory work prior to concealed wiring work
- Chase wall as per marking and assist in conduit laying as per instructions
- Carry out external threading on MS conduit

Elements and Performance Criteria

Carry out preparatory work prior to concealed wiring work

To be competent, the user/individual on the job must be able to:

- PC1.** select, shift, and stack the required hand and power tools at the identified job location
- PC2.** select, shift and stack electrical materials such as cables, wires, conduits and fixtures required for wall chasing and LV wiring work
- PC3.** carry out measurement and marking on wall surface using appropriate tools as per instruction
- PC4.** carry out checks on tools and materials for their safe working conditions perform required basic maintenance on tools

Chase wall as per marking and assist in conduit laying as per instructions

To be competent, the user/individual on the job must be able to:

- PC5.** carry out firm cutting on wall surface using wall chasing machine as per marking while maintaining uniform depth
- PC6.** finish the wall chasing work using hand tools as per standard practice maintaining the required dimension
- PC7.** use appropriate PPEs while carrying out chasing activity
- PC8.** measure mark and cut, cables and conduits as per instruction using appropriate hand and power tools
- PC9.** bend and join conduits as per requirement using appropriate hand and power tools
- PC10.** assist in placing conduits and cables/ wires through the same for permanent LV wiring works
- PC11.** clean the work locations after completion of work and dispose debris appropriate location
- PC12.** assist senior in all relevant cable laying works as per instruction

Carry out external threading on MS conduit

To be competent, the user/individual on the job must be able to:

- PC13.** carry out Measurement & marking on MS conduits
- PC14.** hold the conduit in pipe vice efficiently
- PC15.** cut the conduit at marking point and do the edge finishing using appropriate tools



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- PC16.** fix die cutter in die stock as per instructions
- PC17.** use die stock and lubricant as per requirement
- PC18.** follow trade safety as applicable while perform threading activity
- PC19.** maintain standard housekeeping practice at the workplace

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** general and electrical safety rules applicable to different activities at construction works
- KU2.** administrative rules and regulations applicable to construction sites
- KU3.** material issue and return procedure at site
- KU4.** reporting procedures relevant to own job, unsafe/ hazardous conditions
- KU5.** hand tools are to be used in wall chasing work like chisel, hammer, nails etc.
- KU6.** power tools to be used in wall chasing works like wall chasing machine, drill machine, cutting saws etc.
- KU7.** hand tools/ instruments to be used for marking and measurement prior to carry out chasing activity
- KU8.** hand tools to be used for cutting conduits such as hacksaws, files, hand cutting machine etc.
- KU9.** how to operate hand cutting machine, hand drill machine and PPEs to be used while operating cutting and drill machine
- KU10.** depth of chasing to be provided considering wall thickness and diameter of conduit
- KU11.** how to measure length, area and volume
- KU12.** how to operate vice or threading tool
- KU13.** basics of electrical charge, current flow and their types
- KU14.** concept of conductor and semi-conductor substances or metals and their physical properties
- KU15.** basics of parameters involved in electrical circuits such as voltage, electrical current flow, resistance, heat etc. their signs, units, and conversions
- KU16.** electrical elements those have thermal influences on circuits
- KU17.** safe procedure of termination and joining of cables
- KU18.** hazards, risks involved in LV electrical works and standard safety norms to be followed

Generic Skills (GS)

User/individual on the job needs to know how to:

- GS1.** write in one or more languages, preferably in the local language of the site
- GS2.** read in at least two languages, preferably in the local language of the site and basic English
- GS3.** read and interpret safety sign boards, signage, tags etc. provided at workplace
- GS4.** speak in one or more languages, preferably in one of the local language of the site
- GS5.** listen and follow instructions / communication shared by superiors/ coworkers regarding team requirements or interfaces during work processes



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- GS6.** orally communicate with co-workers regarding support required to complete the respective work
- GS7.** decide on tools to be used at different activities involved in manual earthwork
- GS8.** sequence activities to be carried out on site
- GS9.** identify and use the tools
- GS10.** identify and use of all safety equipment
- GS11.** arrange the material for earthwork
- GS12.** complete work in time as per instructions
- GS13.** determine any violation from organizational and standard safety norms



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Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Carry out preparatory work prior to concealed wiring work</i>	4	16	-	-
PC1. select, shift, and stack the required hand and power tools at the identified job location	1	4	-	-
PC2. select, shift and stack electrical materials such as cables, wires, conduits and fixtures required for wall chasing and LV wiring work	1	4	-	-
PC3. carry out measurement and marking on wall surface using appropriate tools as per instruction	1	4	-	-
PC4. carry out checks on tools and materials for their safe working conditions perform required basic maintenance on tools	1	4	-	-
<i>Chase wall as per marking and assist in conduit laying as per instructions</i>	8	32	-	-
PC5. carry out firm cutting on wall surface using wall chasing machine as per marking while maintaining uniform depth	1	4	-	-
PC6. finish the wall chasing work using hand tools as per standard practice maintaining the required dimension	1	4	-	-
PC7. use appropriate PPEs while carrying out chasing activity	1	4	-	-
PC8. measure mark and cut, cables and conduits as per instruction using appropriate hand and power tools	1	4	-	-
PC9. bend and join conduits as per requirement using appropriate hand and power tools	1	4	-	-
PC10. assist in placing conduits and cables/ wires through the same for permanent LV wiring works	1	4	-	-
PC11. clean the work locations after completion of work and dispose debris appropriate location	1	4	-	-
PC12. assist senior in all relevant cable laying works as per instruction	1	4	-	-



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Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Carry out external threading on MS conduit</i>	8	32	-	-
PC13. carry out Measurement & marking on MS conduits	1	4	-	-
PC14. hold the conduit in pipe vice efficiently	1	4	-	-
PC15. cut the conduit at marking point and do the edge finishing using appropriate tools	2	8	-	-
PC16. fix die cutter in die stock as per instructions	1	4	-	-
PC17. use die stock and lubricant as per requirement	1	4	-	-
PC18. follow trade safety as applicable while perform threading activity	1	4	-	-
PC19. maintain standard housekeeping practice at the workplace	1	4	-	-
NOS Total	20	80	-	-



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National Occupational Standards (NOS) Parameters

NOS Code	CON/N0607
NOS Name	Carry out wall chasing and external threading on MS conduit
Sector	Construction
Sub-Sector	Real Estate and Infrastructure construction
Occupation	Construction Electrical Works
NSQF Level	2
Credits	TBD
Version	1.1
Last Reviewed Date	23/05/2015
Next Review Date	31/03/2022
NSQC Clearance Date	21/07/2016



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CON/N8001: 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

The scope covers the following:

- Interact and communicate effectively with co-workers, superiors and sub-ordinates across different teams
- Support co-workers, superiors and sub-ordinates within the team and across interfacing teams to ensure effective execution of assigned task

Elements and Performance Criteria

Interact and communicate in effective and conclusive manner

To be competent, the user/individual on the job must be able to:

- PC1.** pass on work related information/ requirement clearly to the team members
- PC2.** inform co-workers and superiors about any kind of deviations from work
- PC3.** address the problems effectively and report if required to immediate supervisor appropriately
- PC4.** receive instructions clearly from superiors and respond effectively on the same
- PC5.** communicate to team members/subordinates for appropriate work technique and method
- PC6.** seek clarification and advice as per the requirement and applicability

Support co-workers to execute project requirements

To be competent, the user/individual on the job must be able to:

- PC7.** hand over the required material, tools tackles, equipment and work fronts timely to interfacing teams
- PC8.** work together with co-workers in a synchronized manner

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** own roles and responsibilities
- KU2.** importance of effective communication and establishing strong working
- KU3.** risks of a failure in teamwork in terms of effects on project outcomes, timelines, safety at the construction site, etc.
- KU4.** different modes of communication, and its appropriate usage
- KU5.** importance of creating healthy and cooperative work environment among the gangs of workers



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- KU6.** different activities within his work area where an interaction with other workers is required
- KU7.** applicable techniques of work, properties of materials used, tools and tackles used, safety standards that co-workers might need as per the requirement
- KU8.** importance of proper and effective communication and the expected adverse
- KU9.** importance and need of supporting co-workers facing problems for smooth

Generic Skills (GS)

User/individual on the job needs to know how to:

- GS1.** write in at least one language, preferably in the local language of the site
- GS2.** read in one or more languages, preferably the local language of the site
- GS3.** read communication from team members regarding work completed, materials used, tools and tackles used, support required
- GS4.** speak in one or more languages, preferably in one of the local language of the site
- GS5.** listen and follow instructions / communication shared by superiors/ co-workers regarding team requirements or interfaces during work processes
- GS6.** orally communicate with co-workers regarding support required to complete the respective work
- GS7.** decide on what information is to be shared with co-workers within the team or from interfacing gang of workers
- GS8.** plan work and organize required resources in coordination with team members
- GS9.** complete all assigned task in coordination with team members
- GS10.** take initiative in resolving issues among co-workers or report the same to superiors
- GS11.** ensure best ways of coordination among team members
- GS12.** communicate with co-workers considering their educational / social background
- GS13.** evaluate the complexity of task and determine if any guidance is required from superiors



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Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Interact and communicate in effective and conclusive manner</i>	8	32	-	-
PC1. pass on work related information/ requirement clearly to the team members	2	8	-	-
PC2. inform co-workers and superiors about any kind of deviations from work	1	4	-	-
PC3. address the problems effectively and report if required to immediate supervisor appropriately	1	4	-	-
PC4. receive instructions clearly from superiors and respond effectively on the same	1	4	-	-
PC5. communicate to team members/subordinates for appropriate work technique and method	1	4	-	-
PC6. seek clarification and advice as per the requirement and applicability	2	8	-	-
<i>Support co-workers to execute project requirements</i>	12	48	-	-
PC7. hand over the required material, tools tackles, equipment and work fronts timely to interfacing teams	6	24	-	-
PC8. work together with co-workers in a synchronized manner	6	24	-	-
NOS Total	20	80	-	-



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National Occupational Standards (NOS) Parameters

NOS Code	CON/N8001
NOS Name	Work effectively in a team to deliver desired results at the workplace
Sector	Construction
Sub-Sector	Generic
Occupation	Generic
NSQF Level	2
Credits	TBD
Version	1.0
Last Reviewed Date	23/05/2015
Next Review Date	31/03/2022
NSQC Clearance Date	21/07/2016



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CON/N9001: 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

The scope covers the following:

- Follow safety norms as defined by organization
- Adopt healthy & safe work practices
- Implement good housekeeping and environment protection process and activities

Elements and Performance Criteria

Follow safety norms as defined by organization

To be competent, the user/individual on the job must be able to:

- PC1.** identify and report any hazards, risks or breaches in site safety to the appropriate authority
- PC2.** follow emergency and evacuation procedures in case of accidents, fires, natural calamities
- PC3.** follow recommended safe practices in handling construction materials, including chemical and hazardous material whenever applicable
- PC4.** participate in safety awareness programs like Tool Box Talks, safety demonstrations, mock drills, conducted at site
- PC5.** identify near miss, unsafe condition and unsafe act

Adopt healthy & safe work practices

To be competent, the user/individual on the job must be able to:

- PC6.** use appropriate Personal Protective Equipment (PPE) as per work requirements including: Head Protection (Helmets) Ear protection Fall Protection Foot Protection Face and Eye Protection, Hand and Body Protection Respiratory Protection (if required)
- PC7.** handle all required tools, tackles, materials & equipment safely
- PC8.** follow safe disposal of waste, harmful and hazardous materials as per EHS guidelines
- PC9.** install and apply properly all safety equipment as instructed
- PC10.** follow safety protocol and practices as laid down by site EHS department

Implement good housekeeping practices

To be competent, the user/individual on the job must be able to:

- PC11.** collect and deposit construction waste into identified containers before disposal, separate containers that may be needed for disposal of toxic or hazardous wastes
- PC12.** apply ergonomic principles wherever required

Knowledge and Understanding (KU)



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The individual on the job needs to know and understand:

- KU1.** reporting procedures in cases of breaches or hazards for site safety, accidents, and emergency situations as per guidelines
- KU2.** types of safety hazards at construction sites
- KU3.** basic ergonomic principles as per applicability
- KU4.** the procedure for responding to accidents and other emergencies at site
- KU5.** appropriate personal protective equipment to used based on various
- KU6.** importance of handling tools, equipment and materials as per applicable
- KU7.** health and environments effect of construction materials as per
- KU8.** various environmental protection methods as per applicability
- KU9.** storage of waste including the following at appropriate location: 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
- KU10.** how to use hazardous material, in a safe and appropriate manner as per
- KU11.** safety relevant to tools, tackles, & requirement as per applicability
- KU12.** housekeeping activities relevant to task

Generic Skills (GS)

User/individual on the job needs to know how to:

- GS1.** write in at least one language, preferably in the local language of the site
- GS2.** fill safety formats for near miss, unsafe conditions and safety suggestions
- GS3.** read in one or more language, preferably in the local language of the site
- GS4.** read sign boards, notice boards relevant to safety
- GS5.** speak in one or more language, preferably in one of the local language of the site
- GS6.** listen instructions / communication shared by site EHS and superiors regarding site safety, and conducting tool box talk
- GS7.** communicate reporting of site conditions, hazards, accidents, etc.
- GS8.** not create unsafe conditions for others
- GS9.** keep the workplace clean and tidy
- GS10.** 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
- GS11.** assess and analyze areas which may affect health, safety and environment protocol on the site
- GS12.** ensure personal safety behavior
- GS13.** respond to emergency



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Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Follow safety norms as defined by organization</i>	6	24	-	-
PC1. identify and report any hazards, risks or breaches in site safety to the appropriate authority	1	4	-	-
PC2. follow emergency and evacuation procedures in case of accidents, fires, natural calamities	1	4	-	-
PC3. follow recommended safe practices in handling construction materials, including chemical and hazardous material whenever applicable	2	8	-	-
PC4. participate in safety awareness programs like Tool Box Talks, safety demonstrations, mock drills, conducted at site	1	4	-	-
PC5. identify near miss , unsafe condition and unsafe act	1	4	-	-
<i>Adopt healthy & safe work practices</i>	10	40	-	-
PC6. use appropriate Personal Protective Equipment (PPE) as per work requirements including: Head Protection (Helmets) Ear protection Fall Protection Foot Protection Face and Eye Protection, Hand and Body Protection Respiratory Protection (if required)	2	8	-	-
PC7. handle all required tools, tackles , materials & equipment safely	1	4	-	-
PC8. follow safe disposal of waste, harmful and hazardous materials as per EHS guidelines	1	4	-	-
PC9. install and apply properly all safety equipment as instructed	3	12	-	-
PC10. follow safety protocol and practices as laid down by site EHS department	3	12	-	-
<i>Implement good housekeeping practices</i>	4	16	-	-



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Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC11. collect and deposit construction waste into identified containers before disposal, separate containers that may be needed for disposal of toxic or hazardous wastes	2	8	-	-
PC12. apply ergonomic principles wherever required	2	8	-	-
NOS Total	20	80	-	-



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National Occupational Standards (NOS) Parameters

NOS Code	CON/N9001
NOS Name	Work according to personal health, safety and environment protocol at construction site
Sector	Construction
Sub-Sector	Generic
Occupation	Generic
NSQF Level	2
Credits	TBD
Version	1.1
Last Reviewed Date	23/05/2015
Next Review Date	31/03/2022
NSQC Clearance Date	21/07/2016

Assessment Guidelines and Assessment Weightage

Assessment Guidelines

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 center based on assessment criteria.
5. The passing percentage for each QP will be 50%. To pass the Qualification Pack, every trainee should score a minimum of 50% 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.



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- 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.
- 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.
- 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.
- Minimum duration of Assessment of each QP shall be of 4hrs/trainee.

Minimum Aggregate Passing % at QP Level : 50

(Please note: Every Trainee should score a minimum aggregate passing percentage as specified above, to successfully clear the Qualification Pack assessment.)

Assessment Weightage

Compulsory NOS

National Occupational Standards	Theory Marks	Practical Marks	Project Marks	Viva Marks	Total Marks	Weightage
CON/N0101.Erect and dismantle temporary scaffold of 3.6 meter height	20	80	-	-	100	10
CON/N0104.Carry out manual earthwork at construction site	20	80	-	-	100	10
CON/N0606.Identify and handle different tools, measuring devices and materials relevant to LV electrical works	20	80	-	-	100	25
CON/N0607.Carry out wall chasing and external threading on MS conduit	20	80	-	-	100	30
CON/N8001.Work effectively in a team to deliver desired results at the workplace	20	80	-	-	100	10



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National Occupational Standards	Theory Marks	Practical Marks	Project Marks	Viva Marks	Total Marks	Weightage
CON/N9001.Work according to personal health, safety and environment protocol at construction site	20	80	-	-	100	15
Total	120	480	-	-	600	100



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Acronyms

NOS	National Occupational Standard(s)
NSQF	National Skills Qualifications Framework
QP	Qualifications Pack
TVET	Technical and Vocational Education and Training



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Glossary

Sector	Sector is a 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 organisation.
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 (KU) they need to meet that standard consistently. Occupational Standards are applicable both in the Indian and global contexts.
Performance Criteria (PC)	Performance Criteria (PC) are statements that together specify the standard of performance required when carrying out a task.
National Occupational Standards (NOS)	NOS are occupational standards which apply uniquely in the Indian context.
Qualifications Pack (QP)	QP comprises the set of OS, together with the educational, training and other criteria required to perform a job role. A QP is assigned a unique qualifications pack code.
Unit Code	Unit code is a unique identifier for an Occupational Standard, which is denoted by an 'N'
Unit Title	Unit title gives a clear overall statement about what the incumbent should be able to do.
Description	Description gives a short summary of the unit content. This would be helpful to anyone searching on a database to verify that this is the appropriate OS they are looking for.
Scope	Scope is a 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 quality of performance required.



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Knowledge and Understanding (KU)	<p>Knowledge and Understanding (KU) are statements which together specify the technical, generic, professional and organisational specific knowledge that an individual needs in order to perform to the required standard.</p>
Organisational Context	<p>Organisational context includes the way the organisation is structured and how it operates, including the extent of operative knowledge managers have of their relevant areas of responsibility.</p>
Technical Knowledge	<p>Technical knowledge is the specific knowledge needed to accomplish specific designated responsibilities.</p>
Core Skills/ Generic Skills (GS)	<p>Core skills or Generic Skills (GS) are a group of skills that are the key to learning and working in today's world. These skills are typically needed in any work environment 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.</p>
Electives	<p>Electives are NOS/set of NOS that are identified by the sector as contributive to specialization in a job role. There may be multiple electives within a QP for each specialized job role. Trainees must select at least one elective for the successful completion of a QP with Electives.</p>
Options	<p>Options are NOS/set of NOS that are identified by the sector as additional skills. There may be multiple options within a QP. It is not mandatory to select any of the options to complete a QP with Options.</p>