



Qualification Pack



Helper Bar Bender and Steel Fixer

Options: Manual Earthwork

QP Code: CON/Q0201

Version: 4.0

NSQF Level: 2

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CON/Q0201: Helper Bar Bender and Steel Fixer

Brief Job Description

A Helper Bar Bender and Steel Fixer is responsible for handling and using the appropriate tools, equipment and materials in bar bending and steel fixing activities. The responsibilities include straightening, marking and cutting reinforcement bars, and tying reinforcement for prefabricated cages and at in-situ using hand tools.

Personal Attributes

The individual should be physically fit to work for long durations in varying locations and environmental conditions. The person should be able to work as per the given instructions and in coordination with others. The individual should have basic verbal and written communication skills.

Applicable National Occupational Standards (NOS)

Compulsory NOS:

- [1. CON/N0201: Shift and stack materials, tools and equipment for reinforcement work](#)
- [2. CON/N0202: Mark and cut reinforcement bars to the required length](#)
- [3. CON/N0203: Tie reinforcement bars using different types of ties](#)
- [4. CON/N0101: Erect and dismantle temporary scaffold up to 3.6 meter height](#)
- [5. CON/N9001: Work according to personal health, safety and environment protocols at construction site](#)
- [6. DGT/VSQ/N0101: Employability Skills \(30 Hours\)](#)

Options(Not mandatory):

Option : Manual Earthwork

This unit is about carrying out manual earthwork at construction sites.

- [1. CON/N0104: Carry out manual earthwork at construction sites](#)

Qualification Pack (QP) Parameters

Sector	Construction
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Sub-Sector	Real Estate and Infrastructure construction
Occupation	Bar Bending and Fixing
Country	India
NSQF Level	2
Credits	9
Aligned to NCO/ISCO/ISIC Code	NCO-2015/9313.9900
Minimum Educational Qualification & Experience	No formal education prescribed OR Ability to read and write
Minimum Level of Education for Training in School	Ability to read and write
Pre-Requisite License or Training	NIL
Minimum Job Entry Age	18 Years
Last Reviewed On	NA
Next Review Date	02/03/2024
NSQC Approval Date	31/08/2023
Version	4.0
Reference code on NQR	QG-02-CO-00803-2023-V2-CSDCI
NQR Version	1



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CON/N0201: Shift and stack materials, tools and equipment for reinforcement work

Description

This unit is about shifting and stacking materials, tools and equipment relevant to reinforcement work

Scope

The scope covers the following :

- Shift and stack materials, tools and equipment

Elements and Performance Criteria

Shift and stack materials, tools and equipment

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

- PC1.** select the appropriate materials such as binding wire, bar connecting coupler, thread protection cap and reinforcement steel on the basis of their type, diameter and grade for reinforcement work
- PC2.** select the appropriate hand tools, such as bending lever, hook, measurement tape, gauge, sledge hammer, chisel, pin plate and other relevant tools used in reinforcement work
- PC3.** select the appropriate power tools such as hand held rebar cutting machine, circular rebar cutting machine, rebar threading machine, shearing machine for rebar cutting, rebar bending machine
- PC4.** select the appropriate personal protective gears and equipment such as safety shoes, gloves, helmets, ear plugs, safety harness and safety goggles
- PC5.** select the appropriate types of slings, shackles and lifting belts for lifting
- PC6.** load, unload, shift and stack reinforcement steel following the standard practices
- PC7.** sort, tag, stack and store reinforcement steel as per the type, grade, size and grade
- PC8.** follow the recommended measures to protect reinforcement steel from corrosion and other weather conditions

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** the safety regulations for handling and storing reinforcement tools, materials and components
- KU2.** safe working methods and movements while performing relevant tasks
- KU3.** the relevant housekeeping practices
- KU4.** different types of reinforcement steel, their grade and size
- KU5.** the use of different types of binding wire
- KU6.** the use of different types and use of slings, shackles and lifting belts
- KU7.** the appropriate checks to be performed to determine the quality of materials



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- KU8.** the use of hand tools such as lever, hook, measuring tape, sledge hammer, chisel
- KU9.** the use of different types of cutting and bending machine
- KU10.** how to cut and bend reinforcement bars using relevant hand tools
- KU11.** the importance of correct body posture during cutting and bending reinforcement bars
- KU12.** standard procedure for stacking of reinforcement bars
- KU13.** the workplace procedure for manual and mechanical handling of tools, equipment and materials
- KU14.** the importance of being mindful of overhead electrical wires and cables during shifting / lifting of materials
- KU15.** the handling, storage and maintenance of relevant tools and equipment

Generic Skills (GS)

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

- GS1.** maintain the appropriate data and records
- GS2.** read the appropriate reports and literature concerning the field of work
- GS3.** communicate professionally with all the stakeholders
- GS4.** listen attentively to understand the information/ instructions being shared and take appropriate action
- GS5.** coordinate with the co-workers to achieve the work objectives
- GS6.** plan and execute tasks based on priority
- GS7.** identify possible disruptions to work and take appropriate mitigation measures
- GS8.** take prompt action to deal with workplace emergencies and accidents
- GS9.** evaluate all possible solutions to work-related problems and select the best one
- GS10.** follow the recommended practices for the timely completion of work and achievement of organizational objectives



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Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Shift and stack materials, tools and equipment</i>	30	60	-	10
PC1. select the appropriate materials such as binding wire, bar connecting coupler, thread protection cap and reinforcement steel on the basis of their type, diameter and grade for reinforcement work	-	-	-	-
PC2. select the appropriate hand tools, such as bending lever, hook, measurement tape, gauge, sledge hammer, chisel, pin plate and other relevant tools used in reinforcement work	-	-	-	-
PC3. select the appropriate power tools such as hand held rebar cutting machine, circular rebar cutting machine, rebar threading machine, shearing machine for rebar cutting, rebar bending machine	-	-	-	-
PC4. select the appropriate personal protective gears and equipment such as safety shoes, gloves, helmets, ear plugs, safety harness and safety goggles	-	-	-	-
PC5. select the appropriate types of slings, shackles and lifting belts for lifting	-	-	-	-
PC6. load, unload, shift and stack reinforcement steel following the standard practices	-	-	-	-
PC7. sort, tag, stack and store reinforcement steel as per the type, grade, size and grade	-	-	-	-
PC8. follow the recommended measures to protect reinforcement steel from corrosion and other weather conditions	-	-	-	-
NOS Total	30	60	-	10



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National Occupational Standards (NOS) Parameters

NOS Code	CON/N0201
NOS Name	Shift and stack materials, tools and equipment for reinforcement work
Sector	Construction
Sub-Sector	Real Estate and Infrastructure construction
Occupation	Bar Bending and Fixing
NSQF Level	2.0
Credits	1
Version	4.0
Last Reviewed Date	31/08/2023
Next Review Date	02/03/2024
NSQC Clearance Date	31/08/2023



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CON/N0202: Mark and cut reinforcement bars to the required length

Description

This unit is about straightening, marking and cutting reinforcement bars as per the requirement.

Scope

The scope covers the following :

- Straighten, mark and cut reinforcement bars

Elements and Performance Criteria

Straighten, mark and cut reinforcement bars

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

- PC1.** select the identify hand tools such as bending lever, hook, measurement tape, gauge, sledge hammer, chisels, hack saw
- PC2.** select reinforcement bar of appropriate type, grade and diameter
- PC3.** select and use bending lever and pipe for straightening of rebar of different diameter
- PC4.** mark cut lengths on reinforcement bar appropriately
- PC5.** cut rebar of smaller diameter manually using chisel and sledge hammer or using hand cutting machine/ circular cutting machine/ shearing machine
- PC6.** straighten reinforcement bars with bends or bar cut from the coils
- PC7.** tag cut reinforcement bar with cutting length and stack following standard practices

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** the applicable housekeeping and administrative practices
- KU2.** the use of relevant hand tools for straightening and cutting rebar
- KU3.** the use of relevant power tools for cutting rebar
- KU4.** different types of ties and their use on different structural elements
- KU5.** the use of relevant measurement and marking tools
- KU6.** the benefit of sorting and stacking cut piece rebar on the basis of length and diameter

Generic Skills (GS)

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

- GS1.** maintain the appropriate data and records
- GS2.** read the appropriate reports and literature concerning the field of work
- GS3.** communicate professionally with all the stakeholders



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- GS4.** listen attentively to understand the information/ instructions being shared and take appropriate action
- GS5.** coordinate with the co-workers to achieve the work objectives
- GS6.** plan and execute tasks based on priority
- GS7.** identify possible disruptions to work and take appropriate mitigation measures
- GS8.** take prompt action to deal with workplace emergencies and accidents
- GS9.** evaluate all possible solutions to work-related problems and select the best one
- GS10.** follow the recommended practices for the timely completion of work and achievement of organizational objectives



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Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Straighten, mark and cut reinforcement bars</i>	30	60	-	10
PC1. select the identify hand tools such as bending lever, hook, measurement tape, gauge, sledge hammer, chisels, hack saw	-	-	-	-
PC2. select reinforcement bar of appropriate type, grade and diameter	-	-	-	-
PC3. select and use bending lever and pipe for straightening of rebar of different diameter	-	-	-	-
PC4. mark cut lengths on reinforcement bar appropriately	-	-	-	-
PC5. cut rebar of smaller diameter manually using chisel and sledge hammer or using hand cutting machine/ circular cutting machine/ shearing machine	-	-	-	-
PC6. straighten reinforcement bars with bends or bar cut from the coils	-	-	-	-
PC7. tag cut reinforcement bar with cutting length and stack following standard practices	-	-	-	-
NOS Total	30	60	-	10



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National Occupational Standards (NOS) Parameters

NOS Code	CON/N0202
NOS Name	Mark and cut reinforcement bars to the required length
Sector	Construction
Sub-Sector	Real Estate and Infrastructure construction
Occupation	Bar Bending and Fixing
NSQF Level	2.0
Credits	1
Version	4.0
Last Reviewed Date	31/08/2023
Next Review Date	02/03/2024
NSQF Clearance Date	31/08/2023



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CON/N0203: Tie reinforcement bars using different types of ties

Description

This unit is about tying reinforcement bars using different types of ties for various structural elements such as columns, beams, slabs, footing, etc.

Scope

The scope covers the following :

- Tie reinforcement bars using different types of ties

Elements and Performance Criteria

Tie reinforcement bars using different types of ties

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

- PC1.** use the appropriate type of binding wire, such as mild steel wire or galvanized iron wire
- PC2.** use the appropriate hand and power tools for tying rebar
- PC3.** utilize different types of ties, such as slash tie, ring slash tie, hairpin tie, ring hairpin tie, crown tie, splice tie, etc
- PC4.** cut the binding wire as per the requirement
- PC5.** tie reinforcement using slash tie and splash tie to prevent the displacement of bar as per the requirement
- PC6.** maintain the specified spacing while tying rebar
- PC7.** untie loosened reinforcement bar and secure its position using suitable tie

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** how to identify and use different types of binding wire
- KU2.** the physical properties of binding wires
- KU3.** the identification and use of hand and power tools for reinforcement work
- KU4.** the application of different types of ties such as slash tie, ring slash tie, hairpin tie, ring hairpin tie, crown tie, splice tie
- KU5.** how to tie reinforcement using different types of ties
- KU6.** the length of binding wire required for different types of ties
- KU7.** the importance of following the relevant health and safety practices at construction sites

Generic Skills (GS)

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

- GS1.** maintain the appropriate data and records



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- GS2.** read the appropriate reports and literature concerning the field of work
- GS3.** communicate professionally with all the stakeholders
- GS4.** listen attentively to understand the information/ instructions being shared and take appropriate action
- GS5.** coordinate with the co-workers to achieve the work objectives
- GS6.** plan and execute tasks based on priority
- GS7.** identify possible disruptions to work and take appropriate mitigation measures
- GS8.** take prompt action to deal with workplace emergencies and accidents
- GS9.** evaluate all possible solutions to work-related problems and select the best one
- GS10.** follow the recommended practices for the timely completion of work and achievement of organizational objectives



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Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Tie reinforcement bars using different types of ties</i>	30	60	-	10
PC1. use the appropriate type of binding wire, such as mild steel wire or galvanized iron wire	-	-	-	-
PC2. use the appropriate hand and power tools for tying rebar	-	-	-	-
PC3. utilize different types of ties, such as slash tie, ring slash tie, hairpin tie, ring hairpin tie, crown tie, splice tie, etc	-	-	-	-
PC4. cut the binding wire as per the requirement	-	-	-	-
PC5. tie reinforcement using slash tie and splash tie to prevent the displacement of bar as per the requirement	-	-	-	-
PC6. maintain the specified spacing while tying rebar	-	-	-	-
PC7. untie loosened reinforcement bar and secure its position using suitable tie	-	-	-	-
NOS Total	30	60	-	10



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National Occupational Standards (NOS) Parameters

NOS Code	CON/N0203
NOS Name	Tie reinforcement bars using different types of ties
Sector	Construction
Sub-Sector	Real Estate and Infrastructure construction
Occupation	Bar Bending and Fixing
NSQF Level	2.0
Credits	2
Version	4.0
Last Reviewed Date	31/08/2023
Next Review Date	02/03/2024
NSQC Clearance Date	31/08/2023



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

Description

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

Scope

The scope covers the following :

- Erect and dismantle temporary scaffold

Elements and Performance Criteria

Erect and dismantle temporary scaffold

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

- PC1.** carry out levelling in the area where scaffold needs to be erected and check for ground compactness
- PC2.** shift and stack the materials, components, tools and tackles required for erecting scaffolding, at the identified location
- PC3.** place base plates and sole boards on the ground as per the markings and given instructions
- PC4.** use appropriate components and follow the standard procedure for erecting temporary scaffold up to 3.6 m in height
- PC5.** assist in checking the verticality of scaffold at the first level of erection and take appropriate corrective measures, as required, before moving to the next level
- PC6.** assist in checking the rigidity, stability and support of erected scaffold
- PC7.** set up walk-boards, guard rails, toe-boards and other components on the scaffold's working platform
- PC8.** follow the standard procedure for dismantling the temporary scaffold, i.e. removing guard rails, toe boards, walk boards and other components sequentially
- PC9.** clean and stack all components properly after dismantling
- PC10.** follow the recommended safety measures, including the use of appropriate PPE and being careful while working on heights

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** the use of different types of scaffolds (e.g. cup-lock, frame scaffold)
- KU2.** the use of tools and tackles in scaffolding, including tools for erecting and dismantling 3.6 meter temporary scaffold
- KU3.** the identification and use of different scaffolding components
- KU4.** the standard size of scaffolding components
- KU5.** the standard procedure for erecting and dismantling 3.6 m temporary scaffold



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Generic Skills (GS)

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

- GS1.** maintain the appropriate data and records
- GS2.** read the appropriate reports and literature concerning the field of work
- GS3.** communicate professionally with all the stakeholders
- GS4.** listen attentively to understand the information/ instructions being shared and take appropriate action
- GS5.** coordinate with the co-workers to achieve the work objectives
- GS6.** identify possible disruptions to work and take appropriate mitigation measures
- GS7.** take prompt action to deal with workplace emergencies and accidents
- GS8.** evaluate all possible solutions to work-related problems and select the best one
- GS9.** follow the recommended practices for the timely completion of work and achievement of organizational objectives



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Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Erect and dismantle temporary scaffold</i>	30	60	-	10
PC1. carry out levelling in the area where scaffold needs to be erected and check for ground compactness	-	-	-	-
PC2. shift and stack the materials, components, tools and tackles required for erecting scaffolding, at the identified location	-	-	-	-
PC3. place base plates and sole boards on the ground as per the markings and given instructions	-	-	-	-
PC4. use appropriate components and follow the standard procedure for erecting temporary scaffold up to 3.6 m in height	-	-	-	-
PC5. assist in checking the verticality of scaffold at the first level of erection and take appropriate corrective measures, as required, before moving to the next level	-	-	-	-
PC6. assist in checking the rigidity, stability and support of erected scaffold	-	-	-	-
PC7. set up walk-boards, guard rails, toe-boards and other components on the scaffold's working platform	-	-	-	-
PC8. follow the standard procedure for dismantling the temporary scaffold, i.e. removing guard rails, toe boards, walk boards and other components sequentially	-	-	-	-
PC9. clean and stack all components properly after dismantling	-	-	-	-
PC10. follow the recommended safety measures, including the use of appropriate PPE and being careful while working on heights	-	-	-	-
NOS Total	30	60	-	10



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National Occupational Standards (NOS) Parameters

NOS Code	CON/N0101
NOS Name	Erect and dismantle temporary scaffold up to 3.6 meter height
Sector	Construction
Sub-Sector	Generic
Occupation	Masonry
NSQF Level	3.0
Credits	2
Version	7.0
Last Reviewed Date	31/08/2023
Next Review Date	29/02/2024
NSQC Clearance Date	31/08/2023



Qualification Pack

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

Description

This NOS covers the skill and knowledge required for an individual to work according to personal health, safety and environmental protocols 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
- Follow infection control guidelines as per applicability

Elements and Performance Criteria

Follow safety norms as defined by the 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.** follow all the protocols and safety techniques conveyed during safety awareness programs like Tool Box Talks, safety demonstrations and mock drills conducted at the site
- PC5.** select and operate different types of fire extinguishers corresponding to various types of fires as per EHS guideline
- PC6.** 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:

- PC7.** use appropriate Personal Protective Equipment (PPE) as per work requirements for : Head Protection, Ear protection, Fall Protection ,Foot Protection, Face and Eye Protection, Hand and Body Protection , and Respiratory Protection (if required)
- PC8.** handle all required tools, tackles, materials and equipment safely
- PC9.** follow safe disposal of waste, harmful and hazardous materials as per EHS guidelines
- PC10.** check and install all safety equipment as per standard guidelines
- PC11.** follow safety protocols and practices as laid down by site EHS department
- PC12.** obtain "height pass" clearance for working at heights

Implement good housekeeping practices

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

- PC13.** collect, segregate and deposit construction waste into appropriate containers based on their toxicity or hazardous nature



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PC14. apply ergonomic principles wherever required

Follow infection control guidelines as per applicability

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

PC15. follow recommended personal hygiene, workplace hygiene and sanitization practices

PC16. clean and disinfect all materials, tools and supplies before and after use

PC17. report immediately to concerned authorities regarding signs and symptoms of illness of self and others

Knowledge and Understanding (KU)

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.** use of appropriate personal protective equipment based on various working conditions
- KU6.** importance of handling tools, equipment, and materials as per applicable norms
- KU7.** effect of construction material on health and environments as per applicability
- KU8.** various environmental protection methods as per applicability
- KU9.** storage of waste including non-combustible scrap material and debris, combustible scrap material and debris, general construction waste and trash (non-toxic, non-hazardous), any other hazardous wastes and any other flammable wastes at the appropriate location
- KU10.** how to keep the workplace neat and tidy so as to be safe
- KU11.** how to use hazardous material in a safe and appropriate manner as per applicability
- KU12.** types of fire
- KU13.** procedure of operating different types of fire extinguishers
- KU14.** safety relevant to tools, tackles, and equipment as per applicability
- KU15.** housekeeping activities relevant to task
- KU16.** ways of transmission of infection
- KU17.** ways to manage infectious risks at the workplace
- KU18.** different methods of cleaning, disinfection, sterilization, and sanitization
- KU19.** symptoms of infection like fever, cough, redness, swelling, and inflammation

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



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- GS4.** speak in one or more language, preferably in one of the local language of the site
- GS5.** listen to instructions/communication shared by site EHS and superiors regarding site safety, and conducting the toolbox talk
- GS6.** identify potential safety risks and report to the appropriate authority
- GS7.** assess and analyze areas which may affect health, safety and environment protocol on the site



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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 the organization</i>	6	14	-	-
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. follow all the protocols and safety techniques conveyed during safety awareness programs like Tool Box Talks, safety demonstrations and mock drills conducted at the site	-	-	-	-
PC5. select and operate different types of fire extinguishers corresponding to various types of fires as per EHS guideline	-	-	-	-
PC6. identify near miss, unsafe condition and unsafe act	-	-	-	-
<i>Adopt healthy & safe work practices</i>	15	35	-	-
PC7. use appropriate Personal Protective Equipment (PPE) as per work requirements for : Head Protection, Ear protection, Fall Protection ,Foot Protection, Face and Eye Protection, Hand and Body Protection , and Respiratory Protection (if required)	-	-	-	-
PC8. handle all required tools, tackles, materials and equipment safely	-	-	-	-
PC9. follow safe disposal of waste, harmful and hazardous materials as per EHS guidelines	-	-	-	-
PC10. check and install all safety equipment as per standard guidelines	-	-	-	-



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Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC11. follow safety protocols and practices as laid down by site EHS department	-	-	-	-
PC12. obtain "height pass" clearance for working at heights	-	-	-	-
<i>Implement good housekeeping practices</i>	6	14	-	-
PC13. collect, segregate and deposit construction waste into appropriate containers based on their toxicity or hazardous nature	-	-	-	-
PC14. apply ergonomic principles wherever required	-	-	-	-
<i>Follow infection control guidelines as per applicability</i>	3	7	-	-
PC15. follow recommended personal hygiene, workplace hygiene and sanitization practices	-	-	-	-
PC16. clean and disinfect all materials, tools and supplies before and after use	-	-	-	-
PC17. report immediately to concerned authorities regarding signs and symptoms of illness of self and others	-	-	-	-
NOS Total	30	70	-	-



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National Occupational Standards (NOS) Parameters

NOS Code	CON/N9001
NOS Name	Work according to personal health, safety and environment protocols at construction site
Sector	Construction
Sub-Sector	Real Estate and Infrastructure construction
Occupation	Generic Safety
NSQF Level	4
Credits	1
Version	10.0
Last Reviewed Date	31/08/2023
Next Review Date	31/08/2026
NSQC Clearance Date	31/08/2023



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DGT/VSQ/N0101: Employability Skills (30 Hours)

Description

This unit is about employability skills, Constitutional values, becoming a professional in the 21st Century, digital, financial, and legal literacy, diversity and Inclusion, English and communication skills, customer service, entrepreneurship, and apprenticeship, getting ready for jobs and career development.

Scope

The scope covers the following :

- Introduction to Employability Skills
- Constitutional values - Citizenship
- Becoming a Professional in the 21st Century
- Basic English Skills
- Communication Skills
- Diversity & Inclusion
- Financial and Legal Literacy
- Essential Digital Skills
- Entrepreneurship
- Customer Service
- Getting ready for Apprenticeship & Jobs

Elements and Performance Criteria

Introduction to Employability Skills

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

PC1. understand the significance of employability skills in meeting the job requirements

Constitutional values - Citizenship

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

PC2. identify constitutional values, civic rights, duties, personal values and ethics and environmentally sustainable practices

Becoming a Professional in the 21st Century

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

PC3. explain 21st Century Skills such as Self-Awareness, Behavior Skills, Positive attitude, self-motivation, problem-solving, creative thinking, time management, social and cultural awareness, emotional awareness, continuous learning mindset etc.

Basic English Skills

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

PC4. speak with others using some basic English phrases or sentences

Communication Skills

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

PC5. follow good manners while communicating with others

PC6. work with others in a team



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Diversity & Inclusion

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

PC7. communicate and behave appropriately with all genders and PwD

PC8. report any issues related to sexual harassment

Financial and Legal Literacy

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

PC9. use various financial products and services safely and securely

PC10. calculate income, expenses, savings etc.

PC11. approach the concerned authorities for any exploitation as per legal rights and laws

Essential Digital Skills

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

PC12. operate digital devices and use its features and applications securely and safely

PC13. use internet and social media platforms securely and safely

Entrepreneurship

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

PC14. identify and assess opportunities for potential business

PC15. identify sources for arranging money and associated financial and legal challenges

Customer Service

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

PC16. identify different types of customers

PC17. identify customer needs and address them appropriately

PC18. follow appropriate hygiene and grooming standards

Getting ready for apprenticeship & Jobs

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

PC19. create a basic biodata

PC20. search for suitable jobs and apply

PC21. identify and register apprenticeship opportunities as per requirement

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

KU1. need for employability skills

KU2. various constitutional and personal values

KU3. different environmentally sustainable practices and their importance

KU4. Twenty first (21st) century skills and their importance

KU5. how to use basic spoken English language

KU6. Do and dont of effective communication

KU7. inclusivity and its importance

KU8. different types of disabilities and appropriate communication and behaviour towards PwD

KU9. different types of financial products and services



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- KU10.** how to compute income and expenses
- KU11.** importance of maintaining safety and security in financial transactions
- KU12.** different legal rights and laws
- KU13.** how to operate digital devices and applications safely and securely
- KU14.** ways to identify business opportunities
- KU15.** types of customers and their needs
- KU16.** how to apply for a job and prepare for an interview
- KU17.** apprenticeship scheme and the process of registering on apprenticeship portal

Generic Skills (GS)

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

- GS1.** communicate effectively using appropriate language
- GS2.** behave politely and appropriately with all
- GS3.** perform basic calculations
- GS4.** solve problems effectively
- GS5.** be careful and attentive at work
- GS6.** use time effectively
- GS7.** maintain hygiene and sanitisation to avoid infection



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Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Introduction to Employability Skills</i>	1	1	-	-
PC1. understand the significance of employability skills in meeting the job requirements	-	-	-	-
<i>Constitutional values - Citizenship</i>	1	1	-	-
PC2. identify constitutional values, civic rights, duties, personal values and ethics and environmentally sustainable practices	-	-	-	-
<i>Becoming a Professional in the 21st Century</i>	1	3	-	-
PC3. explain 21st Century Skills such as Self-Awareness, Behavior Skills, Positive attitude, self-motivation, problem-solving, creative thinking, time management, social and cultural awareness, emotional awareness, continuous learning mindset etc.	-	-	-	-
<i>Basic English Skills</i>	2	3	-	-
PC4. speak with others using some basic English phrases or sentences	-	-	-	-
<i>Communication Skills</i>	1	1	-	-
PC5. follow good manners while communicating with others	-	-	-	-
PC6. work with others in a team	-	-	-	-
<i>Diversity & Inclusion</i>	1	1	-	-
PC7. communicate and behave appropriately with all genders and PwD	-	-	-	-
PC8. report any issues related to sexual harassment	-	-	-	-
<i>Financial and Legal Literacy</i>	3	4	-	-
PC9. use various financial products and services safely and securely	-	-	-	-



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Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC10. calculate income, expenses, savings etc.	-	-	-	-
PC11. approach the concerned authorities for any exploitation as per legal rights and laws	-	-	-	-
<i>Essential Digital Skills</i>	4	6	-	-
PC12. operate digital devices and use its features and applications securely and safely	-	-	-	-
PC13. use internet and social media platforms securely and safely	-	-	-	-
<i>Entrepreneurship</i>	3	5	-	-
PC14. identify and assess opportunities for potential business	-	-	-	-
PC15. identify sources for arranging money and associated financial and legal challenges	-	-	-	-
<i>Customer Service</i>	2	2	-	-
PC16. identify different types of customers	-	-	-	-
PC17. identify customer needs and address them appropriately	-	-	-	-
PC18. follow appropriate hygiene and grooming standards	-	-	-	-
<i>Getting ready for apprenticeship & Jobs</i>	1	3	-	-
PC19. create a basic biodata	-	-	-	-
PC20. search for suitable jobs and apply	-	-	-	-
PC21. identify and register apprenticeship opportunities as per requirement	-	-	-	-
NOS Total	20	30	-	-



Qualification Pack

National Occupational Standards (NOS) Parameters

NOS Code	DGT/VSQ/N0101
NOS Name	Employability Skills (30 Hours)
Sector	Cross Sectoral
Sub-Sector	Professional Skills
Occupation	Employability
NSQF Level	2
Credits	1
Version	1.0
Last Reviewed Date	27/01/2022
Next Review Date	26/01/2025
NSQC Clearance Date	27/01/2022



Qualification Pack

CON/N0104: Carry out manual earthwork at construction sites

Description

This unit is about carrying out manual earthwork at construction sites.

Scope

The scope covers the following :

- Prepare for earthwork
- Carry out soil cutting and dressing work
- Carry out backfilling and compaction manually

Elements and Performance Criteria

Prepare for earthwork

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

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

Carry out soil cutting and dressing work

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

- PC5.** carry out excavation to the required depth using the appropriate tools, as per the supervisor's instruction
- PC6.** maintain the recommended slope of earth during excavation, as instructed
- PC7.** dispose earth from the excavated pit by using suitable tools, such as spade, wheelbarrows, pans, etc
- PC8.** check for loose material, soil lumps, pebbles on achieving the desired earth level
- PC9.** carry out surface dressing by disposing loose material, gravels, plant roots, sludge, muck or debris as per the requirement
- PC10.** carry out compaction of the base layer of the pit by ramming or operating hand/ plate compactor

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 the designated location by using the appropriate tools as instructed
- PC12.** sort gravels or oversized aggregates from the soil to be used for backfilling
- PC13.** place and spread earth maintaining uniform layers within the applicable tolerance limit of thickness



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- PC14.** sprinkle water uniformly over the layer to be compacted as required or instructed
- PC15.** carry out ramming or operate hand/ plate compacting machines over the soil layer as per direction
- PC16.** carry out refilling and compaction of excavated trenches, pits surrounding the structures or at necessary location using soil as directed by the supervisor

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** use of hand tools such as spade, pick axe, shovel, pans, wheel for manual earthwork
- KU2.** how to work safely at depth below the ground level
- KU3.** the use of marking tools such as wooden pegs, lime, line threads, ropes
- KU4.** the use of plate compactor, hand roller, earth ramming tools, etc
- KU5.** how to maintain slope in excavation
- KU6.** the relevant preparatory activities for earthwork
- KU7.** the process of soil cutting and dressing
- KU8.** the process of manual backfilling and compaction

Generic Skills (GS)

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

- GS1.** maintain the appropriate data and records
- GS2.** read the appropriate reports and literature concerning the field of work
- GS3.** communicate professionally with all the stakeholders
- GS4.** listen attentively to understand the information/ instructions being shared and take appropriate action
- GS5.** coordinate with the co-workers to achieve the work objectives
- GS6.** plan and execute tasks based on their priority
- GS7.** identify possible disruptions to work and take appropriate mitigation measures
- GS8.** take prompt action to deal with workplace emergencies and accidents
- GS9.** evaluate all possible solutions to work-related problems and select the best one
- GS10.** follow the recommended practices for the timely completion of work and achievement of organizational objectives



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Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Prepare for earthwork</i>	10	20	-	3
PC1. remove all the unwanted materials and removable objects from the worksite using the appropriate hand tools	-	-	-	-
PC2. clean the earth's surface using appropriate hand tools to prepare it for carrying out marking activity	-	-	-	-
PC3. carry out marking for excavation using lime, wooden pegs, ropes or any other suitable materials as instructed	-	-	-	-
PC4. shift and stack fencing/ barricading materials, safety signage, ladders, ropes, earth cutting and shifting tools at the specified locations	-	-	-	-
<i>Carry out soil cutting and dressing work</i>	11	15	-	3
PC5. carry our excavation to the required depth using the appropriate tools, as per the supervisor's instruction	-	-	-	-
PC6. maintain the recommended slope of earth during excavation, as instructed	-	-	-	-
PC7. dispose earth from the excavated pit by using suitable tools, such as spade, wheelbarrows, pans, etc	-	-	-	-
PC8. check for loose material, soil lumps, pebbles on achieving the desired earth level	-	-	-	-
PC9. carry out surface dressing by disposing loose material, gravels, plant roots, sludge, muck or debris as per the requirement	-	-	-	-
PC10. carry out compaction of the base layer of the pit by ramming or operating hand/ plate compactor	-	-	-	-
<i>Carry out backfilling and compaction manually</i>	9	25	-	4



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Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC11. shift and place earth at the designated location by using the appropriate tools as instructed	-	-	-	-
PC12. sort gravels or oversized aggregates from the soil to be used for backfilling	-	-	-	-
PC13. place and spread earth maintaining uniform layers within the applicable tolerance limit of thickness	-	-	-	-
PC14. sprinkle water uniformly over the layer to be compacted as required or instructed	-	-	-	-
PC15. carry out ramming or operate hand/ plate compacting machines over the soil layer as per direction	-	-	-	-
PC16. carry out refilling and compaction of excavated trenches, pits surrounding the structures or at necessary location using soil as directed by the supervisor	-	-	-	-
NOS Total	30	60	-	10



Qualification Pack

National Occupational Standards (NOS) Parameters

NOS Code	CON/N0104
NOS Name	Carry out manual earthwork at construction sites
Sector	Construction
Sub-Sector	Generic
Occupation	Generic
NSQF Level	2
Credits	1
Version	5.0
Last Reviewed Date	31/08/2023
Next Review Date	29/02/2024
NSQC Clearance Date	31/08/2023

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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7. The trainee shall be provided with a chance to repeat the test to correct his procedures in case of improper performance, with a deduction of marks for each iteration.
8. After the certain number of iteration as decided by SSC the trainee is marked as fail, scoring zero marks for the procedure for the practical activity.
9. In case of successfully passing only certain number of NOS's, the trainee is eligible to take subsequent assessment on the balance NOS's to pass the Qualification Pack within the specified timeframe set by SSC.
10. Minimum duration of Assessment of each QP shall be of 4hrs/trainee.

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/N0201.Shift and stack materials, tools and equipment for reinforcement work	30	60	0	10	100	25
CON/N0202.Mark and cut reinforcement bars to the required length	30	60	0	10	100	25
CON/N0203.Tie reinforcement bars using different types of ties	30	60	0	10	100	20
CON/N0101.Erect and dismantle temporary scaffold up to 3.6 meter height	30	60	0	10	100	20
CON/N9001.Work according to personal health, safety and environment protocols at construction site	30	70	0	0	100	5
DGT/VSQ/N0101.Employability Skills (30 Hours)	20	30	-	-	50	5
Total	170	340	0	40	550	100



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Optional: 1 Manual Earthwork

National Occupational Standards	Theory Marks	Practical Marks	Project Marks	Viva Marks	Total Marks	Weightage
CON/N0104.Carry out manual earthwork at construction sites	30	60	0	10	100	10
Total	30	60	0	10	100	10



Qualification Pack

Acronyms

NOS	National Occupational Standard(s)
NSQF	National Skills Qualifications Framework
QP	Qualifications Pack
TVET	Technical and Vocational Education and Training
EHS	Environment Health and Safety
MCQ	Multiple Choice Question
PPE	Personal Protective Equipment



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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>