



Foreman Formwork

QP Code: CON/Q0308

Version: 1.0

NSQF Level: 5

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CON/Q0308: Foreman Formwork

Brief Job Description

Foreman - Formwork is responsible for reading and interpreting drawings, calculate quantity of material required for shuttering works, arrange and allocate resources, monitor shutter making and assembling process at formwork yard/site, instruct proper sequence of work, check for quality and stability of formwork as per plans, specifications, working drawings and also monitor installation and operation of Jump form system. The individual should possess sound technical knowledge, should be able to monitor and maintain safe and quality working practices.

Personal Attributes

This job role requires the individual to be physically and mentally strong enough to oversee the shuttering and formwork at a construction site. The individual should be having strong organizational, interpersonal and communication skills, along with comprehensive technical knowledge of shuttering and formwork operations and ability to supervise construction crew.

Applicable National Occupational Standards (NOS)

Compulsory NOS:

1. [CON/N0307: Read and interpret drawings, formwork specification and standards](#)
2. [CON/N0308: Monitor shutter making and assembling process at formwork yard / site](#)
3. [CON/N0309: Ensure erection and dismantling of formwork as per formwork drawings and specifications](#)
4. [CON/N0310: Check and ensure erected formwork is as per specified standards](#)
5. [CON/N0311: Monitor installation and operation of Jump form system](#)
6. [CON/N7001: Plan, arrange and manage resources for execution of relevant work](#)
7. [CON/N8001: Work effectively in a team to deliver desired results at the workplace](#)
8. [CON/N8002: Plan and organize work to meet expected outcomes](#)
9. [CON/N8003: Supervise, monitor and evaluate performance of subordinates at workplace](#)
10. [CON/N9002: Manage workplace for safe and healthy work environment](#)

Qualification Pack (QP) Parameters



Qualification Pack



Sector	Construction
Sub-Sector	Real Estate and Infrastructure construction
Occupation	Shuttering Carpentry
Country	India
NSQF Level	5
Credits	NA
Aligned to NCO/ISCO/ISIC Code	NCO-2004/3112.90
Minimum Educational Qualification & Experience	10th Class with 3-5 Years of experience as a certified Chargehand shuttering carpenter- System OR 10th Class with 10-15 Years of experience in case of a Non trained worker, in same occupation
Minimum Level of Education for Training in School	
Pre-Requisite License or Training	Recommended training period of 12 to 16 weeks as per QP Foreman - Formwork level5
Minimum Job Entry Age	18 Years
Last Reviewed On	23/03/2015
Next Review Date	31/03/2022
Deactivation Date	17/08/2023
NSQC Approval Date	19/05/2015
Version	1.0
Reference code on NQR	2015/CON/CSDCI/00071
NQR Version	1.0



CON/N0307: Read and interpret drawings, formwork specification and standards

Description

This unit describes the skills and knowledge required to Read & interpret drawings, formwork specification and standards

Scope

The scope covers the following:

- Read & interpret drawings, formwork specification and standards

Elements and Performance Criteria

Read & interpret drawings, formwork specification and standards

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

- PC1.** read & interpret details from relevant formwork schematic working drawings
- PC2.** read and interpret details from general arrangement drawing
- PC3.** read and co-relate schematic working drawing with the GA drawing
- PC4.** read and understand all specification provided in the relevant drawing
- PC5.** read and understand schedule provided for completion of shuttering work
- PC6.** read method statement for erection of formwork & shuttering
- PC7.** read, understand & follow manufactures specification/instruction for erection of standardized formwork
- PC8.** read, understand & follow manufactures specification/instruction for fixing of shutter or for making of pre-cast segment moulds
- PC9.** prepare hand sketches for describing work to sub-ordinates
- PC10.** carryout calculation for required quantity of relevant material from schematic working drawing of formwork

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** standard procedures for shuttering and formwork for in situ and pre cast construction
- KU2.** safety rules and regulation for handling and storing relevant carpentry tools, equipment and materials
- KU3.** personal protection including the use of relevant safety gears & equipments
- KU4.** service request procedures for tools, materials and equipments
- KU5.** statutory compliance requirement related to workmen engagement
- KU6.** principles involved in reading and interpreting various relevant drawings
- KU7.** how to read general arrangement drawing



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- KU8.** simplified sketch preparation from the drawing
- KU9.** how to read plan, elevation and sectional drawing
- KU10.** manufacturers specification/ instructions for erecting and dismantling formwork
- KU11.** components, materials and tools used in formwork
- KU12.** procedure for layout of formwork as per drawings
- KU13.** basic principal of measurement, arithmetic and geometric calculation
- KU14.** terminology used in formwork
- KU15.** linear conversion of units
- KU16.** units of measurement
- KU17.** different types and sizes of formwork material
- KU18.** unit weight of formwork materials
- KU19.** components, materials and tools used in formwork
- KU20.** computer basics & Auto software application for 2D drawing

Generic Skills (GS)

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

- GS1.** write in at least two language, preferably the local language at the site and basic English
- GS2.** provide clear and simple instructions, details & sketches to sub-ordinate
- GS3.** record and documents daily productivity report, daily labour attendance & details regarding work
- GS4.** prepare basic status updates for the superiors in the prescribed format
- GS5.** read one or more language, preferably the local language at the site
- GS6.** read drawing, formwork specification and standards
- GS7.** read key documents including quality standards, standards working methods & applicable tolerance limits
- GS8.** read manufacturer instruction and specification for formwork
- GS9.** speak in one or more language, preferably one of the local language at site
- GS10.** decide on suitability/stability of the foundation/structure on which the staging to be erected
- GS11.** listen and follow instructions clearly given by the superior
- GS12.** provide clear instructions to subordinates for completion of task as per work plan, time schedule and quality
- GS13.** estimate required material and resources for work
- GS14.** decide alternate course of action in case of hindrance to work
- GS15.** plan work & organize required resource in coordination with team members and superior
- GS16.** plan work targets, allocate time schedule to sub-ordinates and organize completion of task within allocated time
- GS17.** ensure completion of work as per agreed time schedule and quality
- GS18.** resolve and solve any conflict within the team
- GS19.** assess quantity of materials for day work
- GS20.** optimize resources



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- GS21.** minimize wastages
- GS22.** assess complexity of the tasks and provide guidance for carrying out corrective action as per requirement
- GS23.** identify and assess how 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>Read & interpret drawings, formwork specification and standards</i>	40	60	-	-
PC1. read & interpret details from relevant formwork schematic working drawings	4	6	-	-
PC2. read and interpret details from general arrangement drawing	4	6	-	-
PC3. read and co-relate schematic working drawing with the GA drawing	4	6	-	-
PC4. read and understand all specification provided in the relevant drawing	4	6	-	-
PC5. read and understand schedule provided for completion of shuttering work	4	6	-	-
PC6. read method statement for erection of formwork & shuttering	4	6	-	-
PC7. read, understand & follow manufactures specification/instruction for erection of standardized formwork	4	6	-	-
PC8. read, understand & follow manufactures specification/instruction for fixing of shutter or for making of pre-cast segment moulds	4	6	-	-
PC9. prepare hand sketches for describing work to sub-ordinates	4	6	-	-
PC10. carryout calculation for required quantity of relevant material from schematic working drawing of formwork	4	6	-	-
NOS Total	40	60	-	-



Qualification Pack



National Occupational Standards (NOS) Parameters

NOS Code	CON/N0307
NOS Name	Read and interpret drawings, formwork specification and standards
Sector	Construction
Sub-Sector	Real Estate and Infrastructure construction
Occupation	Shuttering Carpentry
NSQF Level	5
Credits	TBD
Version	1.0
Last Reviewed Date	23/03/2015
Next Review Date	31/03/2022
NSQC Clearance Date	19/05/2015



CON/N0308: Monitor shutter making and assembling process at formwork yard / site

Description

This Unit describes the skills and knowledge required to Monitor shutter making and assembling process in formwork yard

Scope

The scope covers the following:

- Monitor shutter making and assembling process in formwork yard

Elements and Performance Criteria

Monitor shutter making and assembling process in formwork yard

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

- PC1.** check and ensure quality of plywood & timber prior to use
- PC2.** check and ensure all tools are available for shutter making & assembling process
- PC3.** ensure cutting of plywood & timbers is as per workshop drawing
- PC4.** check & ensure shutter panel board for dimensional accuracy & rigidity
- PC5.** ensure operation of power tools is as per instruction & specification
- PC6.** ensure availability of all tools, components, materials & fixture for assembling of shutters
- PC7.** check & ensure shutter is fabricated as per workshop drawing
- PC8.** check & ensure all components & fixture are fixed properly
- PC9.** check provision for lifting arrangement are provided in case of lifting of heavy weight formwork
- PC10.** ensure proper repairing of damaged shutters for reuse
- PC11.** ensure making of accessories such as wedges, beading, stoppers and filler shutters as required at site
- PC12.** coordinate with site or superior to meet demand at site

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** terminology used in formwork
- KU2.** linear conversion of units
- KU3.** units of measurement
- KU4.** different types and sizes of formwork material
- KU5.** unit weight of individual formwork components
- KU6.** equipments to be used for lifting of formwork material
- KU7.** lifting capacity of belts, slings etc.



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- KU8.** procedure adopted for lifting of assemble shutters
- KU9.** reconciliation of materials used for making shutters
- KU10.** how to control wastage of materials
- KU11.** standard procedures for shuttering and formwork for in situ and pre cast construction
- KU12.** safety rules and regulation for handling and storing relevant carpentry tools, equipment and materials
- KU13.** personal protection including the use of relevant safety gears & equipments
- KU14.** service request procedures for tools, materials and equipments
- KU15.** statutory compliance requirement related to workmen engagement
- KU16.** how to read schematic working drawing of formwork
- KU17.** how to read numeration/general arrangement drawing
- KU18.** simplified sketch preparation from the drawing
- KU19.** plan, elevation and section
- KU20.** use and application of tools, components and equipments
- KU21.** procedure for fixing of components for making shutters
- KU22.** use of measurement and marking tools
- KU23.** basic principal of measurement, arithmetic and geometric calculation

Generic Skills (GS)

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

- GS1.** write in at least two language, preferably the local language at the site and basic English
- GS2.** provide clear and simple instructions, details & sketches to sub-ordinate
- GS3.** record and documents daily productivity report, daily labour attendance & details regarding work
- GS4.** prepare basic status updates for the superiors in the prescribed format
- GS5.** read one or more language, preferably the local language at the site
- GS6.** read drawing, formwork specification and standards
- GS7.** read key documents including quality standards, standards working methods & applicable tolerance limits
- GS8.** read manufacturer instruction and specification for formwork
- GS9.** read various, sign boards, safety rules and safety tags, instruction related to exit routes during emergency at the workplace
- GS10.** speak in one or more language, preferably one of the local language at site
- GS11.** listen and follow instructions clearly given by the superior
- GS12.** provide clear instructions to subordinates for completion of task as per work
- GS13.** decide whether workplace is safe for working and also his work is not creating hazardous conditions for other
- GS14.** decide on process to be adopted for assembling shutters
- GS15.** decide alternate course of action in case of hindrance to work
- GS16.** plan work & organize required resource in coordination with team members and superior



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- GS17.** plan work targets, allocate time schedule to sub-ordinates and organize completion of task within allocated time
- GS18.** ensure completion of work as per agreed time schedule and quality
- GS19.** suggest remedial action to workers for making corrections or repairs to erected formwork
- GS20.** resolve and solve any conflict within the team
- GS21.** decide on spacing and fixing of stiffening material
- GS22.** reconcile material consumption
- GS23.** optimize resources
- GS24.** minimize wastages
- GS25.** assess complexity of the tasks and provide guidance for carrying out corrective action as per requirement
- GS26.** identify and assess how violation of any safety norms may lead to accidents



Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Monitor shutter making and assembling process in formwork yard</i>	40	60	-	-
PC1. check and ensure quality of plywood & timber prior to use	4	6	-	-
PC2. check and ensure all tools are available for shutter making & assembling process	3	4	-	-
PC3. ensure cutting of plywood & timbers is as per workshop drawing	4	6	-	-
PC4. check & ensure shutter panel board for dimensional accuracy & rigidity	4	6	-	-
PC5. ensure operation of power tools is as per instruction & specification	4	6	-	-
PC6. ensure availability of all tools, components, materials & fixture for assembling of shutters	3	4	-	-
PC7. check & ensure shutter is fabricated as per workshop drawing	4	6	-	-
PC8. check & ensure all components & fixture are fixed properly	3	5	-	-
PC9. check provision for lifting arrangement are provided in case of lifting of heavy weight formwork	2	4	-	-
PC10. ensure proper repairing of damaged shutters for reuse	2	4	-	-
PC11. ensure making of accessories such as wedges, beading, stoppers and filler shutters as required at site	2	3	-	-
PC12. coordinate with site or superior to meet demand at site	5	6	-	-
NOS Total	40	60	-	-



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National Occupational Standards (NOS) Parameters

NOS Code	CON/N0308
NOS Name	Monitor shutter making and assembling process at formwork yard / site
Sector	Construction
Sub-Sector	Real Estate and Infrastructure construction
Occupation	Shuttering Carpentry
NSQF Level	5
Credits	TBD
Version	1.0
Last Reviewed Date	23/03/2015
Next Review Date	31/03/2022
NSQC Clearance Date	19/05/2015



CON/N0309: Ensure erection and dismantling of formwork as per formwork drawings and specifications

Description

This Unit describes the skills and knowledge required to Ensure erection & dismantling of formwork as per drawings and specifications

Scope

The scope covers the following:

- Ensure completion of surveying, marking and other preparatory arrangement
- Ensure erection of formwork as per specified standards
- Ensure dismantling of formwork as per specified standards

Elements and Performance Criteria

Ensure completion of surveying, marking and other preparatory arrangement

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

- PC1.** ensure survey works are complete so as to provide required level & reference points for relevant work
- PC2.** check and ensure that all relevant marking is complete as per requirement & applicability
- PC3.** check and ensure that cutting, filling, levelling and compaction of earth if required prior to commencement of work
- PC4.** ensure that base is well compacted and levelled
- PC5.** ensure workplace is clear of construction debris and unwanted material
- PC6.** ensure all guard rails, kerb board safety nets are in place
- PC7.** ensure all tools, tackles, consumables, components, materials and fixtures are available before commencement of work
- PC8.** ensure that shutter surfaces have been cleaned and concrete laitance has been removed prior to erection
- PC9.** ensure suitable release agent is available for applying to sheathing material

Ensure erection of formwork as per specified standards

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

- PC10.** ensure that formwork is set out as per schematic working drawings
- PC11.** ensure that appropriate procedure is followed while erecting formwork and while installing necessary supports, braces, penetrations, embedded parts, etc
- PC12.** ensure lifting & lowering of formwork material using crane is done safely and appropriately
- PC13.** instruct & ensure manufactures specification is followed while erection of any standardized formwork
- PC14.** ensure that there are no gaps or openings in formwork from which poured concrete may leak
- PC15.** ensure tightness of tie rods, supports, bracings and other fixtures
- PC16.** prepare safe approaches for concrete pouring



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- PC17.** ensure all working platform are safe for performing shuttering activity
- PC18.** ensure re-propping is done as per instruction, if required
- PC19.** point out errors to workers and suggest remedial action / demonstrate repair work as and when required

Ensure dismantling of formwork as per specified standards

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

- PC20.** ensure lifting & lowering of formwork material using crane is done safely and appropriately
- PC21.** ensure safe storage and stacking of formwork components
- PC22.** ensure that all manufacturers instructions/ specification are followed while dismantling standardized formwork
- PC23.** ensure that formwork is dismantled sequentially and safety after receiving removing instruction or as per specified stripping time
- PC24.** ensure replace/repair and maintenance of damage components

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** standard practices for shuttering and formwork for in situ and pre cast construction
- KU2.** safety rules and regulations for handling and storing required formwork tools, equipment and materials
- KU3.** personal protection including the use of related safety gears & equipments
- KU4.** service request procedures for tools, materials and equipments
- KU5.** statutory compliance requirement related to workmen engagement
- KU6.** how to read and understand structural and R.C.C drawing
- KU7.** how to read Plan, Elevation and sectional drawing relevant to task
- KU8.** standard procedure of shuttering for in-situ and pre cast construction
- KU9.** standard tolerance of shuttering works for different types of structures as per IS/ International code
- KU10.** checklist for shuttering work
- KU11.** line, level and alignment requirement
- KU12.** required stability of scaffold
- KU13.** preventive and corrective action to ensure formwork meets the required standards of quality
- KU14.** manufacturers specification/ instructions for erecting and dismantling formwork
- KU15.** transfer of level with the use of basic instrument such as auto level
- KU16.** how to physically/ visually check for level, compaction of ground surface
- KU17.** basic principle of measurement, arithmetic and geometric calculations
- KU18.** terminology used in formwork
- KU19.** linear conversion of units
- KU20.** units of measurement
- KU21.** different types and sizes of formwork material
- KU22.** capacity of formwork materials



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- KU23.** components, materials and tools used in shuttering
- KU24.** procedure for layout of formwork as per drawings
- KU25.** use of tools and equipments required in earthworks
- KU26.** standard practices for housekeeping
- KU27.** sequence and prioritizing of activities
- KU28.** how to identify priority and critical activity of relevant task
- KU29.** basic of reinforcement work
- KU30.** basics of concreting works
- KU31.** basics of scaffolding works
- KU32.** safety measures to be adopted for edge protection
- KU33.** computer basics & Auto software application for 2D drawing

Generic Skills (GS)

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

- GS1.** write in at least two language, preferably the local language at the site and basic English
- GS2.** provide clear and simple instructions, details & sketches to sub-ordinate
- GS3.** record and documents daily productivity report, daily labour attendance & details regarding work
- GS4.** prepare basic status updates for the superiors in the prescribed format
- GS5.** read one or more language, preferably the local language at the site
- GS6.** read drawing, formwork specification and standards
- GS7.** read key documents including quality standards, standards working methods & applicable tolerance limits
- GS8.** read manufacturer instruction and specification for formwork
- GS9.** read various, sign boards, safety rules and safety tags , instruction related to exit routes during emergency at the workplace
- GS10.** speak in one or more language, preferably one of the local language at site
- GS11.** listen and follow instructions clearly given by the superior
- GS12.** provide clear instructions to subordinates for completion of task as per work
- GS13.** decide whether workplace is safe for working and also his work is not creating hazardous conditions for other
- GS14.** decide on process to be adopted for assembling shutters
- GS15.** decide alternate course of action in case of hindrance to work
- GS16.** decide on manpower, tools , material and equipment for relevant work
- GS17.** plan work & organize required resource in coordination with team members and superior
- GS18.** plan work targets, allocate time schedule to sub-ordinates and organize completion of task within allocated time
- GS19.** ensure completion of work as per agreed time schedule and quality
- GS20.** suggest remedial action to workers for making corrections or repairs to erected formwork
- GS21.** resolve and solve any conflict within the team



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- GS22.** reconcile material consumption
- GS23.** assess quantity of materials for day work
- GS24.** analyze the current and future trends in availability and requirement of manpower and materials
- GS25.** optimize resources
- GS26.** minimize wastages
- GS27.** assess complexity of the tasks and provide guidance for carrying out corrective action as per requirement
- GS28.** identify and assess how violation of any safety norms may lead to accidents



Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Ensure completion of surveying, marking and other preparatory arrangement</i>	10	15	-	-
PC1. ensure survey works are complete so as to provide required level & reference points for relevant work	1	1	-	-
PC2. check and ensure that all relevant marking is complete as per requirement & applicability	2	2	-	-
PC3. check and ensure that cutting, filling, levelling and compaction of earth if required prior to commencement of work	1	2	-	-
PC4. ensure that base is well compacted and levelled	1	2	-	-
PC5. ensure workplace is clear of construction debris and unwanted material	1	1	-	-
PC6. ensure all guard rails, kerb board safety nets are in place	1	2	-	-
PC7. ensure all tools, tackles, consumables, components, materials and fixtures are available before commencement of work	1	2	-	-
PC8. ensure that shutter surfaces have been cleaned and concrete laitance has been removed prior to erection	1	1	-	-
PC9. ensure suitable release agent is available for applying to sheathing material	1	2	-	-
<i>Ensure erection of formwork as per specified standards</i>	20	30	-	-
PC10. ensure that formwork is set out as per schematic working drawings	3	5	-	-
PC11. ensure that appropriate procedure is followed while erecting formwork and while installing necessary supports, braces, penetrations, embedded parts, etc	3	5	-	-



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Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC12. ensure lifting & lowering of formwork material using crane is done safely and appropriately	2	2	-	-
PC13. instruct & ensure manufactures specification is followed while erection of any standardized formwork	2	3	-	-
PC14. ensure that there are no gaps or openings in formwork from which poured concrete may leak	1	3	-	-
PC15. ensure tightness of tie rods, supports, bracings and other fixtures	2	2	-	-
PC16. prepare safe approaches for concrete pouring	2	2	-	-
PC17. ensure all working platform are safe for performing shuttering activity	2	3	-	-
PC18. ensure re-propping is done as per instruction, if required	2	3	-	-
PC19. point out errors to workers and suggest remedial action / demonstrate repair work as and when required	1	2	-	-
<i>Ensure dismantling of formwork as per specified standards</i>	10	15	-	-
PC20. ensure lifting & lowering of formwork material using crane is done safely and appropriately	2	3	-	-
PC21. ensure safe storage and stacking of formwork components	2	3	-	-
PC22. ensure that all manufacturers instructions/ specification are followed while dismantling standardized formwork	2	2	-	-
PC23. ensure that formwork is dismantled sequentially and safety after receiving removing instruction or as per specified stripping time	3	5	-	-
PC24. ensure replace/repair and maintenance of damage components	1	2	-	-



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Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
NOS Total	40	60	-	-



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National Occupational Standards (NOS) Parameters

NOS Code	CON/N0309
NOS Name	Ensure erection and dismantling of formwork as per formwork drawings and specifications
Sector	Construction
Sub-Sector	Real Estate and Infrastructure construction
Occupation	Shuttering Carpentry
NSQF Level	5
Credits	TBD
Version	1.0
Last Reviewed Date	23/03/2015
Next Review Date	31/03/2022
NSQC Clearance Date	19/05/2015



CON/N0310: Check and ensure erected formwork is as per specified standards

Description

This unit describes the skills and knowledge required to check and ensure erected formwork is as per specified standards

Scope

The scope covers the following:

- Check and ensure erected formwork is as per specified standards

Elements and Performance Criteria

Check and ensure erected formwork is as per specified standards

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

- PC1.** check that formwork is erected in accordance with the schematic working drawing
- PC2.** check for line, level, alignment of formwork
- PC3.** check props used are in plumb, line & as per spacing mentioned/ specified and resting on firm base
- PC4.** check the grout leakage prevention measures are taken
- PC5.** check for lateral stability of formwork
- PC6.** check whether correct components are used for erection and providing support to formwork
- PC7.** check whether the specified release agent is used on sheathing material
- PC8.** check places where extra support to be provided
- PC9.** check for any inserts, cast in fixings and secure at right position
- PC10.** check for all safety measures, especially fall & edge protection provided
- PC11.** check final erected formwork & if any corrections required ensure its rectification

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** standard practices for shuttering and formwork for in situ and pre cast construction
- KU2.** safety rules and regulations for handling and storing required formwork tools, equipment and materials
- KU3.** personal protection including the use of related safety gears & equipments
- KU4.** service request procedures for tools, materials and equipments
- KU5.** statutory compliance requirement related to workmen engagement
- KU6.** standard procedures of shuttering for in situ and pre cast construction
- KU7.** service request procedures for tools, materials and equipment
- KU8.** checklist for shuttering works



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- KU9.** importance of snag list clearance
- KU10.** basic principle of measurement, arithmetic and geometry calculation
- KU11.** maximum tolerance limit for different types of structures as per Indian/International code practices
- KU12.** alignment, plumb, level, etc. required for formwork
- KU13.** preventive and corrective action to ensure formwork meets the required standards of quality
- KU14.** components, materials and tools used in shuttering
- KU15.** procedure for layout of formwork as per drawings
- KU16.** manufacturers instructions/specification for erecting and dismantling forms
- KU17.** types of formwork and their applications for basic and complex structures
- KU18.** types of climbing formwork/ specialized formwork systems
- KU19.** computer basics & Auto software application for 2D drawing

Generic Skills (GS)

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

- GS1.** write in at least two language, preferably the local language at the site and basic English
- GS2.** provide clear and simple instructions, details & sketches to sub-ordinate
- GS3.** record and documents daily productivity report, daily labour attendance & details regarding work
- GS4.** prepare basic status updates for the superiors in the prescribed format
- GS5.** read one or more language, preferably the local language at the site
- GS6.** read drawing, formwork specification and standards
- GS7.** read key documents including quality standards, standards working methods & applicable tolerance limits
- GS8.** read manufacturer instruction and specification for formwork
- GS9.** read various, sign boards, safety rules and safety tags , instruction related to exit routes during emergency at the workplace
- GS10.** speak in one or more language, preferably one of the local language at site
- GS11.** listen and follow instructions clearly given by the superior
- GS12.** provide clear instructions to subordinates for completion of task as per work
- GS13.** decide whether workplace is safe for working and also his work is not creating hazardous conditions for other
- GS14.** decide on acceptance criteria for the checked work
- GS15.** decide on correct method to be adopted for checking
- GS16.** decide alternate course of action in case of hindrance to work
- GS17.** plan work & organize required resource in coordination with team members and superior
- GS18.** plan work targets, allocate time schedule to sub-ordinates and organize completion of task within allocated time
- GS19.** ensure completion of work as per agreed time schedule and quality
- GS20.** guide sub-ordinate for making corrections in erected formwork to meet standards



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- GS21.** resolve and solve any conflict within the team
- GS22.** determine process to correct error in erected formwork
- GS23.** provide support at critical and in confined areas
- GS24.** determine spacing of support on the basis of load
- GS25.** optimize resources
- GS26.** minimize wastages
- GS27.** assess complexity of the tasks and provide guidance for carrying out corrective action as per requirement
- GS28.** identify and assess how violation of any safety norms may lead to accidents



Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Check and ensure erected formwork is as per specified standards</i>	40	60	-	-
PC1. check that formwork is erected in accordance with the schematic working drawing	8	12	-	-
PC2. check for line, level, alignment of formwork	4	6	-	-
PC3. check props used are in plumb, line & as per spacing mentioned/ specified and resting on firm base	3	3	-	-
PC4. check the grout leakage prevention measures are taken	2	4	-	-
PC5. check for lateral stability of formwork	4	6	-	-
PC6. check whether correct components are used for erection and providing support to formwork	3	3	-	-
PC7. check whether the specified release agent is used on sheathing material	2	4	-	-
PC8. check places where extra support to be provided	4	6	-	-
PC9. check for any inserts, cast in fixings and secure at right position	2	4	-	-
PC10. check for all safety measures, especially fall & edge protection provided	4	6	-	-
PC11. check final erected formwork & if any corrections required ensure its rectification	4	6	-	-
NOS Total	40	60	-	-



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National Occupational Standards (NOS) Parameters

NOS Code	CON/N0310
NOS Name	Check and ensure erected formwork is as per specified standards
Sector	Construction
Sub-Sector	Real Estate and Infrastructure construction
Occupation	Shuttering Carpentry
NSQF Level	5
Credits	TBD
Version	1.0
Last Reviewed Date	23/03/2015
Next Review Date	31/03/2022
NSQC Clearance Date	19/05/2015



CON/N0311: Monitor installation and operation of Jump form system

Description

This unit describes the skills and knowledge required to Monitor installation and operation of Jump form system

Scope

The scope covers the following:

- Monitor installation of Jump form system using cranes or hydraulic system
- Monitor operation of Jump form system

Elements and Performance Criteria

Monitor installation of Jump form system using cranes or hydraulic system

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

- PC1.** prepare site for installation of Jump form system
- PC2.** assemble shutters panel as per schematic working drawing and assembly plans
- PC3.** ensure work instructions are followed during installation
- PC4.** ensure profiling of shutter panel as per required shape of structures
- PC5.** ensure all fixtures including joints, clamps, hooks, nuts & bolts are fixed properly
- PC6.** check for adequate batter in shutter
- PC7.** ensure tightness & rigidity of assembled shutter
- PC8.** ensure all survey points are provided
- PC9.** ensure proper installation and interconnection of hydraulic system, power units and accessories as per manufacturer specifications & standards
- PC10.** ensure working deck is prepared for movement of man & materials
- PC11.** ensure placing of climbing rod/MS rod

Monitor operation of Jump form system

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

- PC12.** check & ensure other relevant work are completed
- PC13.** ensure anchor & ties are fixed as per designed
- PC14.** ensure proper fixings of sleeves , embedded parts are undisturbed
- PC15.** monitor proper functioning of hydraulic jack and cranes
- PC16.** monitor lifting ensuring line, level & alignment
- PC17.** monitor rising of formwork using crane or hydraulic jacks
- PC18.** monitor rising of climbing profile

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:



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- KU1.** standard practices for shuttering and formwork for in situ and pre cast construction
- KU2.** safety rules and regulations for handling and storing required formwork tools, equipment and materials
- KU3.** personal protection including the use of related safety gears & equipments
- KU4.** service request procedures for tools, materials and equipments
- KU5.** statutory compliance requirement related to workmen engagement
- KU6.** statutory compliance requirement related to installation and operation of Jump form system
- KU7.** types of Jump form system/ specialized formwork system such as slip form, jump form
- KU8.** schematic installation & working drawing
- KU9.** preparatory works for installation of Jump form system
- KU10.** profiling of formwork as per required shape of structure
- KU11.** functional of hydraulic system
- KU12.** how to check plumb and take corrective action
- KU13.** how to determine & control rotation
- KU14.** use of fixtures, connection
- KU15.** use of tools, tackles, components & equipments required for installation and operation of Jump form system
- KU16.** use of anchor cones, ties, sleeves
- KU17.** manufacturers instructions/specification for Jump form system
- KU18.** preventive and corrective action to ensure formwork meets the required standards of quality
- KU19.** maximum tolerance limit for different types of structures as per Indian/International code practices
- KU20.** procedure for layout of formwork as per drawings
- KU21.** types of formwork and their applications for basic and complex structures
- KU22.** types of cranes and hydraulic jacks used for lifting of Jump form system
- KU23.** basic of reinforcement works
- KU24.** basics of concreting works
- KU25.** weight of different components, assembled panels
- KU26.** computer basics & Auto software application for 2D drawing

Generic Skills (GS)

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

- GS1.** write in at least two language, preferably the local language at the site and basic English
- GS2.** provide clear and simple instructions, details & sketches to sub-ordinate
- GS3.** record and documents daily productivity report, daily labour attendance & details regarding work
- GS4.** prepare basic status updates for the superiors in the prescribed format
- GS5.** read one or more language, preferably the local language at the site
- GS6.** read drawing, formwork specification and standards



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- GS7.** read key documents including quality standards, standards working methods & applicable tolerance limits
- GS8.** read manufacturer instruction and specification for formwork
- GS9.** read various, sign boards, safety rules and safety tags, instruction related to exit routes during emergency at the workplace
- GS10.** speak in one or more language, preferably one of the local language at site
- GS11.** listen and follow instructions clearly given by the superior
- GS12.** provide clear instructions to subordinates for completion of task as per work
- GS13.** decide whether workplace is safe for working and also his work is not creating hazardous conditions for other
- GS14.** decide on prioritizing activity to meet site requirement
- GS15.** decide on completion of preceding activity for further course of action
- GS16.** plan work & organize required resource in coordination with team members and superior
- GS17.** plan work targets, allocate time schedule to subordinates and organize completion of task within allocated time
- GS18.** ensure completion of work as per agreed time schedule and quality
- GS19.** suggest remedial action to workers for making corrections if required
- GS20.** resolve any problem related to installation and operation of climbing formwork
- GS21.** resolve and solve any conflict within the team
- GS22.** assess potential hazards involved in installation of jump form system and ensure preventive action are taken
- GS23.** assess potential hazards involved in operations of jump form system and ensure preventive action are taken
- GS24.** optimize resources
- GS25.** minimize wastages
- GS26.** assess complexity of the tasks and provide guidance for carrying out corrective action as per requirement
- GS27.** identify and assess how violation of any safety norms may lead to accidents



Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Monitor installation of Jump form system using cranes or hydraulic system</i>	20	30	-	-
PC1. prepare site for installation of Jump form system	2	3	-	-
PC2. assemble shutters panel as per schematic working drawing and assembly plans	2	3	-	-
PC3. ensure work instructions are followed during installation	2	2	-	-
PC4. ensure profiling of shutter panel as per required shape of structures	2	2	-	-
PC5. ensure all fixtures including joints, clamps, hooks, nuts & bolts are fixed properly	2	2	-	-
PC6. check for adequate batter in shutter	2	2	-	-
PC7. ensure tightness & rigidity of assembled shutter	1	3	-	-
PC8. ensure all survey points are provided	1	3	-	-
PC9. ensure proper installation and interconnection of hydraulic system, power units and accessories as per manufacturer specifications & standards	3	5	-	-
PC10. ensure working deck is prepared for movement of man & materials	2	3	-	-
PC11. ensure placing of climbing rod/MS rod	1	2	-	-
<i>Monitor operation of Jump form system</i>	20	30	-	-
PC12. check & ensure other relevant work are completed	2	2	-	-
PC13. ensure anchor & ties are fixed as per designed	3	5	-	-
PC14. ensure proper fixings of sleeves , embedded parts are undisturbed	2	2	-	-



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Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC15. monitor proper functioning of hydraulic jack and cranes	4	8	-	-
PC16. monitor lifting ensuring line, level & alignment	4	6	-	-
PC17. monitor rising of formwork using crane or hydraulic jacks	2	4	-	-
PC18. monitor rising of climbing profile	3	3	-	-
NOS Total	40	60	-	-



Qualification Pack



National Occupational Standards (NOS) Parameters

NOS Code	CON/N0311
NOS Name	Monitor installation and operation of Jump form system
Sector	Construction
Sub-Sector	Real Estate and Infrastructure construction
Occupation	Shuttering Carpentry
NSQF Level	5
Credits	TBD
Version	1.0
Last Reviewed Date	23/03/2015
Next Review Date	31/03/2022
NSQC Clearance Date	19/05/2015



CON/N7001: Plan, arrange and manage resources for execution of relevant work

Description

This unit describes the knowledge and the skills required for an individual to plan and organize own work in order to meet expected outcome.

Scope

The scope covers the following:

- Arrange and manage manpower
- Arrange allocate and manage tools, material and equipment

Elements and Performance Criteria

Arrange and manage manpower

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

- PC1.** determine quantum and nature of work under assigned activity
- PC2.** calculate requirement of manpower for assigned activities
- PC3.** submit manpower requirement to superiors
- PC4.** allocate and extract work as per plan
- PC5.** provide clear instructions to workmen for execution of work
- PC6.** ensure optimum utilization of manpower resources
- PC7.** record the daily labour attendance
- PC8.** record the daily productivity report

Arrange allocate and manage tools, material and equipment

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

- PC9.** estimate quantity of assigned work
- PC10.** estimate requirement for material, components and fixtures
- PC11.** estimate equipment, tools and accessories required
- PC12.** submit material, equipment and tool requirement to superiors
- PC13.** allocate material, equipment and tools to workmen and extract the work as per plan
- PC14.** provide clear instructions for optimized use of resources

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** standard practices for execution of relevant work
- KU2.** safety rules and regulations for handling and storing required tools, equipment and materials
- KU3.** personal protection including the use of related safety gears & equipments



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- KU4.** service request procedures for tools, materials and equipments
- KU5.** statutory compliance requirement related to workmen engagement
- KU6.** construction drawing of relevant work
- KU7.** manpower requirement on the basis of quantum of work and productivity
- KU8.** sequence and priority of activities
- KU9.** how to identify priority and critical activity of relevant task
- KU10.** method and technique on briefing team members about relevant work
- KU11.** different check to evaluate progress and quality of relevant works
- KU12.** importance of daily productivity report
- KU13.** importance of daily attendance register
- KU14.** standard working practices for relevant works
- KU15.** principles of measurements
- KU16.** conversion of units
- KU17.** arithmetic and geometric calculation
- KU18.** how to calculate quantum of relevant work
- KU19.** calculation of tools and material requirement
- KU20.** optimize use of available resources
- KU21.** computer basics auto-cad software application for 2D drawing

Generic Skills (GS)

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

- GS1.** write at least two language, preferably the local language at the site and basic English
- GS2.** provide clear and simple instructions, details & sketches to sub-ordinate
- GS3.** record and document daily productivity report, daily labour attendance & details regarding work done
- GS4.** prepare basic status updates for the superiors in the prescribed format
- GS5.** read one or more language, preferably the local language at the site
- GS6.** read relevant drawing, specification and standards
- GS7.** read key documents including quality standards, standards working methods & applicable tolerance limits
- GS8.** read manufacturer instruction and specification for relevant work
- GS9.** read various, sign boards, safety rules and safety tags , instruction related to exit routes during emergency at the workplace
- GS10.** speak in one or more language, preferably one of the local language at site
- GS11.** listen and follow instructions clearly given by the superior
- GS12.** provide clear instructions to subordinates for completion of task as per work plan, time schedule and quality
- GS13.** decide whether workplace is safe for working and also his work is not creating hazardous conditions for other
- GS14.** decide on manpower, tools , material and equipment for relevant work



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- GS15.** decide alternate course of action in case of hindrance to work
- GS16.** plan work & organize required resource in coordination with team members and superior
- GS17.** plan work targets, schedules for subordinates for completion of task as per work plan, time schedule and quality
- GS18.** ensure completion of work as per agreed time schedule and quality
- GS19.** suggest remedial action to workers for making corrections
- GS20.** resolve and solve any conflict within the team
- GS21.** reconcile material consumption
- GS22.** assess quantity of resources required for day work
- GS23.** optimize resources
- GS24.** minimize wastages
- GS25.** assess complexity of the tasks and carry out corrective action as per requirement
- GS26.** identify and assess how violation of any safety norms may lead to accidents



Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Arrange and manage manpower</i>	22	33	-	-
PC1. determine quantum and nature of work under assigned activity	2	3	-	-
PC2. calculate requirement of manpower for assigned activities	3	4.5	-	-
PC3. submit manpower requirement to superiors	2	3	-	-
PC4. allocate and extract work as per plan	3	4.5	-	-
PC5. provide clear instructions to workmen for execution of work	3	4.5	-	-
PC6. ensure optimum utilization of manpower resources	3	4.5	-	-
PC7. record the daily labour attendance	3	4.5	-	-
PC8. record the daily productivity report	3	4.5	-	-
<i>Arrange allocate and manage tools, material and equipment</i>	18	27	-	-
PC9. estimate quantity of assigned work	3	4.5	-	-
PC10. estimate requirement for material, components and fixtures	3	4.5	-	-
PC11. estimate equipment, tools and accessories required	3	4.5	-	-
PC12. submit material, equipment and tool requirement to superiors	3	4.5	-	-
PC13. allocate material, equipment and tools to workmen and extract the work as per plan	3	4.5	-	-
PC14. provide clear instructions for optimized use of resources	3	4.5	-	-
NOS Total	40	60	-	-



Qualification Pack



National Occupational Standards (NOS) Parameters

NOS Code	CON/N7001
NOS Name	Plan, arrange and manage resources for execution of relevant work
Sector	Construction
Sub-Sector	Generic
Occupation	Generic
NSQF Level	5
Credits	TBD
Version	1.0
Last Reviewed Date	23/03/2015
Next Review Date	31/03/2022
NSQC Clearance Date	19/05/2015



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



Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Interact and communicate in effective and conclusive manner</i>	28	42	-	-
PC1. pass on work related information/ requirement clearly to the team members	4	6	-	-
PC2. inform co-workers and superiors about any kind of deviations from work	4	6	-	-
PC3. address the problems effectively and report if required to immediate supervisor appropriately	8	12	-	-
PC4. receive instructions clearly from superiors and respond effectively on the same	4	6	-	-
PC5. communicate to team members/subordinates for appropriate work technique and method	4	6	-	-
PC6. seek clarification and advice as per the requirement and applicability	4	6	-	-
<i>Support co-workers to execute project requirements</i>	12	18	-	-
PC7. hand over the required material, tools tackles, equipment and work fronts timely to interfacing teams	6	9	-	-
PC8. work together with co-workers in a synchronized manner	6	9	-	-
NOS Total	40	60	-	-



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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	5
Credits	TBD
Version	1.2
Last Reviewed Date	23/05/2015
Next Review Date	31/03/2022
NSQC Clearance Date	21/07/2016



CON/N8002: Plan and organize work to meet expected outcomes

Description

This unit describes the knowledge and the skills required for an individual to plan and organize own work in order to meet expected outcome

Elements and Performance Criteria

Prioritize work activities to achieve desired results

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

- PC1.** understand clearly the targets and timelines set by superiors
- PC2.** plan activities as per schedule and sequence
- PC3.** provide guidance to the subordinates to obtain desired outcome
- PC4.** plan housekeeping activities prior to and post completion of work

Organize desired resources prior to commencement of work

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

- PC5.** list and arrange required resources prior to commencement of work
- PC6.** select and employ correct tools, tackles and equipment for completion of desired work
- PC7.** complete the work with allocated resources
- PC8.** engage allocated manpower in an appropriate manner
- PC9.** use resources in an optimum manner to avoid any unnecessary wastage
- PC10.** employ tools, tackles and equipment with care to avoid damage to the same
- PC11.** organize work output, materials used, tools and tackles deployed
- PC12.** processes adopted to be in line with the specified standards and instructions

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** importance of proper housekeeping
- KU2.** policies, procedures and work targets set by superiors
- KU3.** roles and responsibilities in executing the work for subordinates and self
- KU4.** standard practices of work to be adopted for assigned task
- KU5.** how to use available resources in a judicious and appropriate manner to minimize wastages or damage

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.** list out the assigned works and targets



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- GS3.** read in one or more language, preferably the local language at the site
- GS4.** read communication from co-workers, superiors and notices from other departments as per requirement of the level
- GS5.** speak in one or more language, preferably one of the local language at the site
- GS6.** listen and follow communication shared by co-workers regarding standard work processes, resources available, timelines, etc.
- GS7.** communicate effectively with co-workers and subordinates
- GS8.** decide on what sequence is to be adopted for execution of work
- GS9.** plan and organize the materials, tools, tackles and equipment required to execute the work
- GS10.** complete all assigned task with proper planning and organizing
- GS11.** arrange or seek help to arrange for material, tools and tackles in case of shortfall
- GS12.** analyze areas of work which could result in a delay of work, wastage of material or damage to tools and tackles
- GS13.** evaluate potential solutions to minimize avoidable delays and wastages at the construction site



Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Prioritize work activities to achieve desired results</i>	17	25.5	-	-
PC1. understand clearly the targets and timelines set by superiors	5	7.5	-	-
PC2. plan activities as per schedule and sequence	4	6	-	-
PC3. provide guidance to the subordinates to obtain desired outcome	5	7.5	-	-
PC4. plan housekeeping activities prior to and post completion of work	3	4.5	-	-
<i>Organize desired resources prior to commencement of work</i>	23	34.5	-	-
PC5. list and arrange required resources prior to commencement of work	4	6	-	-
PC6. select and employ correct tools, tackles and equipment for completion of desired work	3	4.5	-	-
PC7. complete the work with allocated resources	3	4.5	-	-
PC8. engage allocated manpower in an appropriate manner	2	3	-	-
PC9. use resources in an optimum manner to avoid any unnecessary wastage	2	3	-	-
PC10. employ tools, tackles and equipment with care to avoid damage to the same	2	3	-	-
PC11. organize work output, materials used, tools and tackles deployed	4	6	-	-
PC12. processes adopted to be in line with the specified standards and instructions	3	4.5	-	-
NOS Total	40	60	-	-



Qualification Pack



National Occupational Standards (NOS) Parameters

NOS Code	CON/N8002
NOS Name	Plan and organize work to meet expected outcomes
Sector	Construction
Sub-Sector	Generic
Occupation	Generic
NSQF Level	5
Credits	TBD
Version	1.1
Last Reviewed Date	23/03/2015
Next Review Date	31/03/2022
NSQC Clearance Date	19/05/2015



CON/N8003: Supervise, monitor and evaluate performance of subordinates at workplace

Description

This OS covers the skills and knowledge required by an individual to supervise, monitor and evaluate performance of subordinates at work place

Scope

The scope covers the following:

- Monitor all construction work activities performed by subordinates and evaluate their performance and ensure strict adherence to quality instructions & timelines as per organizational policies and procedures

Elements and Performance Criteria

Supervise, monitor and evaluate performance of all subordinates and ensure adherence to organizational policies and procedures

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

- PC1.** fix expected targets for the respective gang as per site requirements and allocate work to subordinates
- PC2.** establish expected performance standards and expectations for the respective gang of workers to meet the desired outcomes
- PC3.** inspect assigned work to the respected gang of workers through progressive checking
- PC4.** observe and verify the work activities performed by the subordinates at the construction site
- PC5.** monitor overall performance of subordinates on the designed measures to ensure quality requirements set by the concerned authority
- PC6.** ensure adherence to the organizational policies and procedures for all relevant construction activities by the workmen subordinations

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** policies, procedures and work targets for performance evaluation and appraisals
- KU2.** organizational policies, procedures and protocol for smooth completion of work at the respective workplace
- KU3.** complete work/task accurately by following standard specifications and procedures by optimized and correct used of materials , tools, tackles and equipment

Generic Skills (GS)

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



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- GS1.** write in at one or more language, preferably the local language
- GS2.** read in at one or more language, preferably the local language at the site
- GS3.** speak in at one or more language, preferably one of the local language at the site
- GS4.** effectively communicate with team members at workplace
- GS5.** rectify errors, select workman according to the performance and carry out appropriate allocation of task
- GS6.** motivate the subordinate for better quality work
- GS7.** plan work as per right sequence and organize required resources in coordination with the team members
- GS8.** complete work as per the requirement
- GS9.** solve any anomalies in work processes, critical problems & cause for delays at workplace
- GS10.** sort workers activities in order of sequence and importance workers
- GS11.** identify root cause and effects of workers conflicts at workplace
- GS12.** evaluate and find solutions to minimize errors and suggest improvements for optimizing resource utilization
- GS13.** assess which situations would require intervention of superiors



Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Supervise, monitor and evaluate performance of all subordinates and ensure adherence to organizational policies and procedures</i>	40	60	-	-
PC1. fix expected targets for the respective gang as per site requirements and allocate work to subordinates	6	9	-	-
PC2. establish expected performance standards and expectations for the respective gang of workers to meet the desired outcomes	6	9	-	-
PC3. inspect assigned work to the respected gang of workers through progressive checking	8	12	-	-
PC4. observe and verify the work activities performed by the subordinates at the construction site	8	12	-	-
PC5. monitor overall performance of subordinates on the designed measures to ensure quality requirements set by the concerned authority	6	9	-	-
PC6. ensure adherence to the organizational policies and procedures for all relevant construction activities by the workmen subordinations	6	9	-	-
NOS Total	40	60	-	-



Qualification Pack



National Occupational Standards (NOS) Parameters

NOS Code	CON/N8003
NOS Name	Supervise, monitor and evaluate performance of subordinates at workplace
Sector	Construction
Sub-Sector	Generic
Occupation	Generic
NSQF Level	5
Credits	TBD
Version	1.0
Last Reviewed Date	23/03/2015
Next Review Date	31/03/2022
NSQC Clearance Date	19/05/2015



CON/N9002: Manage workplace for safe and healthy work environment

Description

This unit describes the skill and knowledge required to maintain a healthy & safe working environment for the group of people working under an individual

Scope

This unit/task covers the following:

- Ensure healthy and safe working environment for subordinates.
- Ensure effective implementation of health, safety and environment policies and procedures
- Identify and respond to risks / fire and emergencies associated with the work practices, workplace and ensure related organizational & statutory requirement as followed

Elements and Performance Criteria

Ensure healthy and safe working environment for subordinates

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

- PC1.** ensure proper housekeeping at workplace
- PC2.** implement safe handling , stacking methods at workplace / store
- PC3.** ensure that health and safety plan is followed by all subordinates
- PC4.** Identify any hazard in workplace and notify them to appropriate authority
- PC5.** ensure that all safety and protection installation are correctly placed & adequate
- PC6.** ensure safe access is available at work place for movement of workers & materials
- PC7.** ensure safe use of tools and tackles by the workmen as per applicability
- PC8.** ensure appropriate use of following Personal Protective Equipment (PPE) as per applicability:
Head Protection (Helmets Ear Protection Fall Protection Foot Protection Face and Eye Protection, Hand & Body Protection Respiratory Protection
- PC9.** maintain entrances & exit from confined spaces , excavated pits and other location in concurrence with safety parameters or instruction from safety personals

Identify and respond to risks / fire and emergencies associated with the work practices, workplace and ensure related organizational & statutory requirement as followed

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

- PC10.** ensure organizational policies and procedures are followed for health , safety and welfare, in relation to: methods of receiving or sourcing information dealing with accidents and emergencies associated with the work and environment reporting stooping work evacuation fire risks and safe exit procedures
- PC11.** follow procedures for accident recording and reporting as per organizational and statutory requirements
- PC12.** ensure effective adherence to response to emergency procedures /protocols
- PC13.** report any case of emergency / risks to the concern people at the construction site
- PC14.** report any perceived risk hazards to the superiors / concerned EHS
- PC15.** demonstrate the use of fire protection equipments for different type of fire hazard



PC16. implement control measures to reduce risk & meet legal requirement as per organizational policies

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** the policies, procedures and protocol set up by the EHS Department With respect to Health , Safety and Environment at the respective construction site
- KU2.** reporting procedures in cases of breaches or hazards in site safety, accidents or emergency situations
- KU3.** safe working practices for tools, tackles and equipment
- KU4.** workplace policies and health and safety requirements for dealing with potential risks as defined by the EHS department
- KU5.** how to respond to accidents & emergencies
- KU6.** the appropriate personal protective equipment to be used based on various working conditions
- KU7.** how to use necessary material ,tools, tackles and equipment in a safe and appropriate manner as specified by site EHS for each level and respective workman gang
- KU8.** monitoring working in workplace keeping safety & health in mind

Generic Skills (GS)

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

- GS1.** write in one or more language
- GS2.** read in one or more language
- GS3.** read instructions, rules, guidelines, sign boards related to safety as per the requirements
- GS4.** speak in one or more language, preferably one of the local language at the site
- GS5.** listen and follow instructions shared by site EHS and superiors regarding site safety
- GS6.** communicate reporting of site conditions, hazards, accidents, etc.
- GS7.** decide upon the appropriate application & installation of safety equipments like barricades and nets
- GS8.** decide upon the tools box talks contents
- GS9.** identify any hazards in workplace organize safety equipments prior to commencing work
- GS10.** work to ensure safe and healthy environmental conditions at workplace
- GS11.** identify analysis & report hazards, accidents, health and safety risks, etc. or seek help from the appropriate authorities to address the same as per the guidelines laid down by site EHS
- GS12.** analyze areas of work which are potential safety hazards and could result in damage to life or property for the respective gang at the construction site
- GS13.** respond to critical health risks or accidents on an urgent basis through appropriate actions



Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Ensure healthy and safe working environment for subordinates</i>	20	30	-	-
PC1. ensure proper housekeeping at workplace	2	3	-	-
PC2. implement safe handling , stacking methods at workplace / store	2	3	-	-
PC3. ensure that health and safety plan is followed by all subordinates	2	3	-	-
PC4. Identify any hazard in workplace and notify them to appropriate authority	2	3	-	-
PC5. ensure that all safety and protection installation are correctly placed & adequate	2	3	-	-
PC6. ensure safe access is available at work place for movement of workers & materials	2	3	-	-
PC7. ensure safe use of tools and tackles by the workmen as per applicability	4	6	-	-
PC8. ensure appropriate use of following Personal Protective Equipment (PPE) as per applicability: Head Protection (Helmets Ear Protection Fall Protection Foot Protection Face and Eye Protection, Hand &Body Protection Respiratory Protection	2	3	-	-
PC9. maintain entrances & exit from confined spaces , excavated pits and other location in concurrence with safety parameters or instruction form safety personals	2	3	-	-
<i>Identify and respond to risks / fire and emergencies associated with the work practices, workplace and ensure related organizational & statutory requirement as followed</i>	20	30	-	-



Qualification Pack



Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC10. ensure organizational policies and procedures are followed for health , safety and welfare, in relation to: methods of receiving or sourcing information dealing with accidents and emergencies associated with the work and environment reporting stooping work evacuation fire risks and safe exit procedures	4	6	-	-
PC11. follow procedures for accident recording and reporting as per organizational and statutory requirements	2	3	-	-
PC12. ensure effective adherence to response to emergency procedures /protocols	3	4.5	-	-
PC13. report any case of emergency / risks to the concern people at the construction site	3	4.5	-	-
PC14. report any perceived risk hazards to the superiors / concerned EHS	3	4.5	-	-
PC15. demonstrate the use of fire protection equipments for different type of fire hazard	3	4.5	-	-
PC16. implement control measures to reduce risk & meet legal requirement as per organizational policies	2	3	-	-
NOS Total	40	60	-	-



National Occupational Standards (NOS) Parameters

NOS Code	CON/N9002
NOS Name	Manage workplace for safe and healthy work environment
Sector	Construction
Sub-Sector	Generic
Occupation	Generic
NSQF Level	5
Credits	TBD
Version	1.0
Last Reviewed Date	23/03/2015
Next Review Date	31/03/2022
NSQC Clearance Date	19/05/2015

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) (PC) will be assigned marks proportional to its importance in NOS. SSC will also lay down proportion of marks for Theory and Skills Practical for each PC.
2. The assessment for the theory part will be based on knowledge bank of questions created by the SSC.
3. Individual assessment agencies will create unique question papers for theory part for each candidate at each examination/training center (as per assessment criteria below).
4. Individual assessment agencies will create unique evaluations for skill practical for every student at each examination/ training center based on these criteria.
5. In case of successfully passing only certain number of NOSs, the trainee is eligible to take subsequent assessment on the balance NOS's to pass the Qualification Pack.
6. In case of unsuccessful completion, the trainee may seek reassessment on the Qualification Pack

Minimum Aggregate Passing % at QP Level : 70



Qualification Pack



(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/N0307.Read and interpret drawings, formwork specification and standards	40	60	-	-	100	18
CON/N0308.Monitor shutter making and assembling process at formwork yard / site	40	60	-	-	100	12
CON/N0309.Ensure erection and dismantling of formwork as per formwork drawings and specifications	40	60	-	-	100	15
CON/N0310.Check and ensure erected formwork is as per specified standards	40	60	-	-	100	12
CON/N0311.Monitor installation and operation of Jump form system	40	60	-	-	100	18
CON/N7001.Plan, arrange and manage resources for execution of relevant work	40	60	-	-	100	8
CON/N8001.Work effectively in a team to deliver desired results at the workplace	40	60	-	-	100	2
CON/N8002.Plan and organize work to meet expected outcomes	40	60	-	-	100	2
CON/N8003.Supervise, monitor and evaluate performance of subordinates at workplace	40	60	-	-	100	2



Qualification Pack



National Occupational Standards	Theory Marks	Practical Marks	Project Marks	Viva Marks	Total Marks	Weightage
CON/N9002.Manage workplace for safe and healthy work environment	40	60	-	-	100	11
Total	400	600	-	-	1000	100



Qualification Pack



Acronyms

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



Qualification Pack



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.
Knowledge and Understanding (KU)	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.



Qualification Pack



Organisational Context	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.
Technical Knowledge	Technical knowledge is the specific knowledge needed to accomplish specific designated responsibilities.
Core Skills/ Generic Skills (GS)	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.
Electives	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.
Options	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.