



Model Curriculum

1. Chargehand Shuttering carpenter - System

SECTOR: Construction
SUB-SECTOR: Real Estate and Infrastructure Construction
OCCUPATION: Shuttering Carpentry
REF ID: CON/Q0306, V1.0
NSQF LEVEL: 4





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Chargehand Shuttering Carpenter- System

CURRICULUM / SYLLABUS

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

Program Name	Chargehand Shuttering Carpenter- System		
Qualification Pack Name & Reference ID. ID	CON/Q0306, v1.0		
Version No.	1.0	Version Update Date	16-03-2016
Pre-requisites to Training	Preferably 8th Standard		
Training Outcomes	After completing this programme, participants will be able to: <ul style="list-style-type: none">• Assemble & dismantle system formwork for complex RCC structure: - Use of hand and power tools for making wooden shutter boards.• Assemble & dismantle system formwork for Pre-cast segments & form finished R.C.C structures:- Standard methods for carrying out shuttering of R.C.C structural elements• Erect & dismantle jump form system:- Concepts of quality checking for shuttering works for various R.C.C structural elements• Work effectively in a team to deliver desired results at the workplace :- Organised working procedure within a team at site• Plan and organize work to meet expected outcomes :- Prioritizing activities and organising resources to meet desired outcome.• Work according to personal health, safety and environment protocol at construction site: - Importance of Health & Safety aspects & measures to be followed while working.		

This course encompasses 6 out of 6 National Occupational Standards (NOS) of “Chargehand Shuttering Carpenter- System” Qualification Pack issued by “Construction Skill Development Council of India”.

Sr. No.	Module	Key Learning Outcomes	Equipment Required
1	<p>Introduction</p> <p>Theory Duration (hh:mm) 08:00</p> <p>Practical Duration (hh:mm) 00:00</p>	<ul style="list-style-type: none"> • Role description/ functions of the job role • Expected personal attributes from the job role • Brief description about course content, mode of learning and duration of course • Future possible progression and career development provisions on completion of the course 	<p><u>Classroom Requirement</u></p> <ol style="list-style-type: none"> 1. Classroom of 30 students capacity 2. Black/White board 3. Projector/LED Monitor 4. Computer 5. Trade specific charts and other teaching aids
2	<p>Assemble & dismantle system formwork for complex RCC structure</p> <p>Theory Duration (hh:mm) 60:00</p> <p>Practical Duration (hh:mm) 140:00</p> <p>Corresponding NOS Code CON/N0316</p>	<p>Theory: -</p> <ul style="list-style-type: none"> • Understanding of Numeration/General arrangement drawing • Understanding of plan, elevation and section • Types of Formwork (Conventional & System) • Different types of system formwork • Standard size of all formwork tools, material and components • Hand and power tools for shuttering carpentry works and their application • Types of release agents(shuttering oil, cream emulsions, chemical release agents) and their application • Standard procedure for assembling and dismantling system formwork for R.C.C structures (Staircase, landing, ramps, inclined structures, curved or circular structures) • General tolerance for shuttering works • Stripping time for removing shuttering of various R.C.C structural elements • Productivity norms for shuttering of various R.C.C structural element • Use of lifting gears for shifting, fixing and removing of heavy shutter panel • Stacking and storing of formwork components based on size, type and uses. • Repair of formwork components and housekeeping 	<p><u>Hand tools</u></p> <ol style="list-style-type: none"> 1. Claw Hammer 2. Handsaw 3. Tenonsaw 4. Iron Jack Planner 5. Wooden Marking Gauge 6. Woden Mortise Gauge 7. Spirit Level 8. Tri-Square 9. Auger 10. Steel Measuring Tape 11. Farmer Chisel 12. Farmer Chisel 13. Mortise Chisel 14. Cutting Player 15. Screw Driver 10" 16. Marking Knife / Scribe 17. Wooden Mallet 18. Oil Stone (Rough / Smooth) 19. Center Punch 20. Bench Vice 21. Hacksaw Frame with blade

Sr. No.	Module	Key Learning Outcomes	Equipment Required
		<ul style="list-style-type: none"> • Sequence of activity followed for R.C.C work • Basics of reinforcement works • Basics of concreting works • Basics of scaffolding works <p><u>Demonstration/ Practical :-</u></p> <ul style="list-style-type: none"> • Reading of Numeration/ General arrangement drawing • Calculate quantity of shuttering work from drawing • Estimate quantity of formwork material require from drawing • Estimate the manpower requirement based on productivity for various types of shuttering works • Demonstrate assembling and dismantling of formwork for R.C.C structural elements (Footing, column, wall, beam and slab) • Demonstrate assembling and dismantling of system formwork for R.C.C structures (Staircase, landing, ramps, inclined structures, curved or circular structures) 	<ul style="list-style-type: none"> 22. Triangle file - 6mm (Medium) 23. Half Round File & Rasp cut file 24. Drill Bit 25. Plumb Bob 26. Ring Spanner 27. Double End Spanner 28. Screw Spanner 12" LM 29. Carpenter Working Table 30. Nail Bar <p><u>Measuring Instruments</u></p> <ul style="list-style-type: none"> 31. Measuring tape 32. Spirit level 33. Plumb-bob 34. Mason's line 35. Water level tube <p><u>Materials</u></p> <ul style="list-style-type: none"> 36. System formwork components and fixtures 37. Cup-lock scaffolding components (set)/Frame scaffold components 38. 40 NB pipes 39. Swivel coupler 40. Fixed clamp 41. Steel walkways 42. Aluminium/ GI ladder 43. Safety net <p><u>Power tools</u></p> <ul style="list-style-type: none"> 44. Hand held timber Cutting machine (Circular saw, Zig-jack saw)

Sr. No.	Module	Key Learning Outcomes	Equipment Required
			45. Drilling machine 46. Table mounted circular saw 47. Planing machine <u>PPEs & safety equipment's</u> 48. Helmet 49. Safety shoes 50. Safety belt 51. Cotton hand gloves 52. Nose mask 53. Safety apron 54. Ear plugs 55. Goggles 56. Reflective jackets 57. Safety message boards
3	Assemble & dismantle system formwork for Pre-cast segments & form finished R.C.C structures Theory Duration (hh:mm) 52:00 Practical Duration (hh:mm) 124:00 Corresponding NOS Code CON/N0317	Theory:- <ul style="list-style-type: none"> • Introduction to Pre-cast construction and its application in construction sector • Advantages and disadvantages of Pre-cast construction over in-situ construction • Introduction to form finished construction and its application • Understanding of shop drawing for assembling of precast segments moulds/frames • Preparatory activity for assembling and dismantling of precast moulds/frames and form finished formwork • Hand tools and power tools uses • Activity sequence for precast construction (reinforcement work, fixing of block out, cast-in-services, assembling of components) • Standard procedure for assembling and dismantling of moulds/frames for Precast segments • Standard procedure for assembling and dismantling formwork for form finished structures 	<u>Hand tools</u> <ol style="list-style-type: none"> 1. Claw Hammer 2. Handsaw 3. Tenonsaw 4. Iron Jack Planner 5. Wooden Marking Gauge 6. Wooden Mortise Gauge 7. Spirit Level 8. Tri-Square 9. Auger 10. Steel Measuring Tape 11. Farmer Chisel 12. vFarmer Chisel 13. Mortise Chisel 14. Cutting Player 15. Screw Driver 10" 16. Marking Knife / Scribe 17. Wooden Mallet 18. Oil Stone (Rough / Smooth)

Sr. No.	Module	Key Learning Outcomes	Equipment Required
		<p><u>Demonstration/ Practical :-</u></p> <ul style="list-style-type: none"> • Demonstrate reading of shop drawings for assembling pre-cast moulds/frames • Demonstrate assembling and dismantling of moulds/frames for Precast segments • Demonstrate assembling and dismantling of formwork for form finished structures 	<p>19. Center Punch 20. Bench Vice 21. Hacksaw Frame with blade 22. Triangle file - 6mm (Medium) 23. Half Round File & Rasp cut file 24. Drill Bit 25. Plumb Bob 26. Ring Spanner 27. Double End Spanner 28. Screw Spanner 12" LM 29. Carpenter Working Table 30. Nail Bar</p> <p><u>Measuring Instruments</u></p> <p>31. Measuring tape 32. Spirit level 33. Plumb-bob 34. Mason's line 35. Water level tube</p> <p><u>Materials</u></p> <p>36. System formwork components and fixtures 37. Cup-lock scaffolding components (set)/Frame scaffold components 38. 40 NB pipes 39. Swivel coupler 40. Fixed clamp 41. Steel walkways 42. Aluminium/ GI ladder 43. Safety net</p> <p><u>Power tools</u></p> <p>44. Hand held timber Cutting</p>

Sr. No.	Module	Key Learning Outcomes	Equipment Required
			machine (Circular saw, Zig-jack saw) 45. Drilling machine 46. Table mounted circular saw 47. Planing machine <u>PPEs & safety equipment's</u> 48. Helmet 49. Safety shoes 50. Safety belt 51. Cotton hand gloves 52. Nose mask 53. Safety apron 54. Ear plugs 55. Goggles 56. Reflective jackets 57. Safety message boards
4	Erect & dismantle jump form system Theory Duration (hh:mm) 048:00 Practical Duration (hh:mm) 112:00 Corresponding NOS Code CON/N0318	<u>Theory:</u> <ul style="list-style-type: none"> • Introduction to specialized formwork – Climbing formwork(Jump form system and slip formwork) • Understanding of shop drawing for installation of jump form system • Preparatory works for installation of Jump form system • Types of cranes and hydraulic jacks used for lifting of Jump form system • Potential hazards associated with jump form system and preventive measures • Tools and tackles, components & equipment require for installation of Jump form system • Use of fixtures and connection • Standard procedure for profiling of formwork • Standard procedure for assembling and dismantling jump form system <u>Demonstration/ Practical :-</u>	<u>Hand tools</u> <ol style="list-style-type: none"> 1. Claw Hammer 2. Handsaw 3. Tenonsaw 4. Iron Jack Planner 5. Wooden Marking Gauge 6. Wooden Mortise Gauge 7. Spirit Level 8. Tri-Square 9. Auger 10. Steel Measuring Tape 11. Farmer Chisel 12. Farmer Chisel 13. Mortise Chisel 14. Cutting Player 15. Screw Driver 10" 16. Marking Knife / Scribe 17. Wooden Mallet

Sr. No.	Module	Key Learning Outcomes	Equipment Required
		<ul style="list-style-type: none"> • Demonstrate reading of shop drawing for installation of jump form system • Demonstrate profiling of formwork as per required shape • Demonstrate assembling and dismantling of jump form system as per standard procedure • Demonstrate fixing of anchor cones, ties, sleeves, shear key etc. 	<ol style="list-style-type: none"> 18. Oil Stone (Rough / Smooth) 19. Center Punch 20. Bench Vice 21. Hacksaw Frame with blade 22. Triangle file - 6mm (Medium) 23. Half Round File & Rasp cut file 24. Drill Bit 25. Plumb Bob 26. Ring Spanner 27. Double End Spanner 28. Screw Spanner 12" LM 29. Carpenter Working Table 30. Nail Bar <u>Measuring Instruments</u> 31. Measuring tape 32. Spirit level 33. Plumb-bob 34. Mason's line 35. Water level tube <u>Materials</u> 36. Jump form system components and fixtures 37. Cup-lock scaffolding components (set)/Frame scaffold components 38. 40 NB pipes 39. Swivel coupler 40. Fixed clamp 41. Steel walkways 42. Aluminium/ GI ladder 43. Safety net

Sr. No.	Module	Key Learning Outcomes	Equipment Required
			<p><u>Power tools</u></p> <p>44. Hand held timber Cutting machine (Circular saw, Zig-jack saw)</p> <p>45. Drilling machine</p> <p>46. Table mounted circular saw</p> <p>47. Planing machine</p> <p><u>PPEs & safety equipment's</u></p> <p>48. Helmet</p> <p>49. Safety shoes</p> <p>50. Safety belt</p> <p>51. Cotton hand gloves</p> <p>52. Nose mask</p> <p>53. Safety apron</p> <p>54. Ear plugs</p> <p>55. Goggles</p> <p>56. Reflective jackets</p> <p>57. Safety message boards</p>
5	<p>Work effectively in a team to deliver desired results at the workplace</p> <p>Theory Duration (hh:mm) 07:00</p> <p>Practical Duration (hh:mm) 17:00</p> <p>Corresponding NOS Code CON/N8001</p>	<p>Theory: -</p> <ul style="list-style-type: none"> • Method of oral and written communication skills with co-workers, trade seniors while handling and carrying out visual checks on materials, tools and tackles, equipments • How to interpret scope of shuttering work, material/ tools handling by adhering to instructions or consulting with seniors • Method of providing instruction to subordinates or reporting to seniors clearly and promptly • Seek necessary support and complete assigned tasks within stipulated time duration • Keep good relation and maintain well behavior with co-workers <p>Demonstration/ practical: -</p>	

Sr. No.	Module	Key Learning Outcomes	Equipment Required
		<p>The skills will be developed and practiced while carrying out following trade related activities in a predictable and familiar working condition</p> <ul style="list-style-type: none"> • Selection of materials, tools or devices for defined purpose under • Handling formwork materials, tools and equipments • Carrying out cutting, sizing and planing of timber • Carrying out monitoring of shutter making activity • Ensuring erection and dismantling of formwork as per formwork drawings and specifications • Inspecting quality of shuttering works with the help of team members for line, level, alignment, support, rigidity etc. 	
6	<p>Plan and organize work to meet expected outcomes</p> <p>Theory Duration (hh:mm) 04:00</p> <p>Practical Duration (hh:mm) 12:00</p> <p>Corresponding NOS Code CON/N8002</p>	<p>Theory:-</p> <ul style="list-style-type: none"> • Basic concept of productivity, sequence of working and implementation of safety and organizational norms while working • Optimization of resources • To plan work within defined scope of work • Upkeep, storing and stacking methods of tools, materials used for domain specific works • Requisition of resources, reporting for requirement of resources orally and in written to concerned authority • Importance of housekeeping, <p>Demonstration/ Practical :-</p> <p>The skills for planning and organizing will be developed and practiced while carrying out following trade related activities</p> <ul style="list-style-type: none"> • Selection of materials, tools or devices for defined purpose in an optimum manner • Handling material, tools and equipments relevant to scaffolding works • Prioritize all works/ activities • Erection and dismantling of common customized system scaffold 	

Sr. No.	Module	Key Learning Outcomes	Equipment Required
		<ul style="list-style-type: none"> Erection and dismantling of staircase tower scaffold Erection and dismantling of mobile tower scaffold Optimum use of resources while performing task Adherence to stipulated timelines for completion of scaffolding work 	
7	<p>Work according to personal health, safety and environment protocol at construction site</p> <p>Theory Duration (hh:mm) 08:00</p> <p>Practical Duration (hh:mm) 16:00</p> <p>Corresponding NOS Code CON/N9001</p>	<p>Theory:-</p> <ul style="list-style-type: none"> Types of hazards involved in construction sites Types of hazards involved in scaffolding work Emergency safety control measures and actions to be taken under emergency situation Identification of unsafe act and unsafe condition Concept of :- <ol style="list-style-type: none"> First Aid process Use of fire extinguisher Classification of fires and fire extinguisher Safety drills Types and use of PPEs required for reinforcement works Safety protocols and practices Reporting procedure to the concerned authority in emergency situations Standard procedure of handling, storing and stacking material What is safe disposal of waste, type of waste and their disposal basic ergonomic principles as per applicability <p>Demonstration/ Practical :- The skills will be developed and practiced while carrying out following trade related activities:</p> <ol style="list-style-type: none"> Selection of PPEs and use them appropriately as per working need of scaffolding works, handling, storing, stacking and shifting of scaffolding material, tools and equipments Selection of PPEs and use them appropriately as per working need of 	<p>PPEs</p> <ol style="list-style-type: none"> Safety Helmet Safety goggles Safety shoes Safety belt Cotton gloves Ear plugs Reflective jackets Dust mask Fire Prevention kit

Sr. No.	Module	Key Learning Outcomes	Equipment Required
		<p>erection and dismantling of various types of scaffold.</p> <p>3. Identification of locations, situations/ circumstances, malpractices which can be hazardous for general or scaffolding works</p> <p>4. Selection of fire extinguisher based on classification of fire, standard practice of storing & stacking fire-fighting equipments/ materials at work locations</p> <p>5. Disposal of waste materials as per their nature and effects on weather</p>	
	<p>Total Duration</p> <p>Theory Duration 187:00</p> <p>Practical Duration 421:00</p>	<p>Unique Equipment Required:</p> <p><u>Classroom Requirement</u> Classroom of 30 students capacity, Black/White board, Projector/LED Monitor, Computer, Trade specific charts and other teaching aids</p> <p><u>Hand Tools</u> Claw Hammer, Handsaw, Tenonsaw, Iron Jack Planner , Wooden Marking Gauge , Woden Mortise Gauge, Spirit Level , Tri-Square, Auger , Steel Measuring Tape, Farmer Chisel , Farmer Chisel , Mortise Chisel , Cutting Player, Screw Driver 10", Marking Knife / Scribe , Wooden Mallet, Oil Stone (Rough / Smooth), Center Punch , Bench Vice, Hacksaw Frame with blade, Triangle file - 6mm (Medium) , Half Round File & Rasp cut file, Drill Bit, Plumb Bob, Ring Spanner , Double End Spanner, Screw Spanner 12" LM, Carpenter Working Table, Nail Bar</p> <p><u>Measuring Instruments</u> Measuring tape, Spirit level, Water level tube, Plumb-bob, Mason's line</p> <p><u>General requirement</u> Lifting appliance (Sling, Shackle, Belts)</p> <p><u>Materials</u> System Formwork components and fixtures, Jump form system components and fixtures, Cup-lock scaffolding components (set)/Frame scaffold components, Staircase tower components with fixtures, Castor wheels , 40 NB pipes, Swivel coupler, Fixed clamp, Steel walkways, Aluminium/ GI ladder, Safety net</p> <p><u>PPEs</u> Safety Helmet, Safety goggles, Safety shoes, Safety belt, Cotton gloves, Ear plugs , Reflective jackets, Dust mask, Fire Prevention kit</p>	

Grand Total Course Duration: 608 **Hours, 0 Minutes**

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



Trainer Prerequisites for Job role: “Chargehand Shuttering Carpenter-System” mapped to Qualification Pack: “CON/Q0306, v1.0”

Sr. No.	Area	Details
1	Description	To deliver accredited training service, mapping to the curriculum detailed above, in accordance with the Qualification Pack “CON/Q0306”.
2	Personal Attributes	Aptitude for conducting training, and pre/ post work to ensure competent, employable candidates at the end of the training. Strong communication skills, interpersonal skills, ability to work as part of a team; a passion for quality and for developing others; well-organised and focused, eager to learn and keep oneself updated with the latest in the mentioned field
3	Minimum Educational Qualifications	Trainer/Assessor-50% in each NOS & 80% overall, Lead trainer/ Lead Assessors- 50% in each NOS and overall 90%
4a	Domain Certification	Trainer/Assessor-80% in each NOS of Qualification Pack “MEP/Q0102” or “MEP/Q0104” and Lead trainer/Lead Assessors- 90% in each NOS of Qualification Pack “MEP/Q0101” or “MEP/Q0103”
4b	Platform Certification	Trainer/Assessor-50% in each NOS of Qualification Pack “MEP/Q0101” or “MEP/Q0103” & 80% overall, Lead trainer/ Lead Assessors- 50% in each NOS of Qualification Pack “MEP/Q0101” or “MEP/Q0103” and overall 90%
5	Experience	i. Technical Degree holder with minimum three years of Field experience and preferably two years of teaching experience or, ii. In case of a Diploma Holder five years of field experience and preferably two years of teaching experience or, iii. In case of ITI/12 th pass minimum eight years of field experience and preferably two years of teaching Experience.



CRITERIA FOR ASSESSMENT OF TRAINEES

<u>Job Role</u>	Chargehand Shuttering Carpenter - System
<u>Qualification Pack</u>	CON/Q0306
<u>Sector Skill Council</u>	Construction

Guidelines for Assessment

1. Criteria for assessment for each Qualification Pack will be created by the Sector Skill Council. Each Performance Criteria (PC) will be assigned marks proportional to its importance in NOS. SSC will also lay down proportion of marks for Theory and Skills Practical for each PC.
2. The assessment for the 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 70%. To pass the Qualification Pack, every trainee should score a minimum of 70% individually in each NOS.
6. The Assessor shall check the final outcome of the practices while evaluating the steps performed to achieve the final outcome.
7. The trainee shall be provided with a chance to repeat the test to correct his procedures in case of improper performance, with a deduction of marks for each iteration.
8. After the certain number of iteration as decided by SSC the trainee is marked as fail, scoring zero marks for the procedure for the practical activity.
9. In case of successfully passing only certain number of NOS's, the trainee is eligible to take subsequent assessment on the balance NOS's to pass the Qualification Pack within the specified timeframe set by SSC.
10. Minimum duration of Assessment of each QP shall be of 4hrs/trainee.

Assessment outcomes	Assessment Criteria for outcomes	Marks Allocation			
		Total Mark	Out Of	Theory	Skills Practical
CON/N0316: Assemble & dismantle system formwork for complex RCC structure	PC1. read & understand drawings, schedule, work method statement	100	7	2	5
	PC2. check & ensure all tools, materials, components are available as per requirements		3	1	2
	PC3. check all other preparatory works such as marking, staging are completed		3	1	2
	PC4. check that fixing & fasteners are available as per system used and as per requirements		7	2	5
	PC5. position and set out formwork manually or by mechanical means as per instruction & requirement		7	2	5
	PC6. check profiling of shutters panels as per required shape of structure		7	2	5
	PC7. position & provide necessary support using props or other appropriate components based on system used		7	2	5
	PC8. plug all openings & gaps using foam sheet and adhesive tape or other appropriate materials		3	1	2
	PC9. check working platform for safety		3	1	2
	PC10. check erected formwork for line, level, alignment & ensure it is within tolerance limit		10	3	7
	PC11. check for dimensional accuracy and right angle of shutters, take necessary corrective measures if required		10	3	7
	PC12. report to superior for completion & checking of shuttering, do any rework as suggested by engineer in charge or superior, and get it approved		7	2	5
	PC13. follow dismantling procedure /standard practice as per system used		3	1	2
	PC14. dismantle system formwork ensuring stripping time as per is/international code for different types of structures		3	1	2
	PC15. remove bracing and all other support sequentially and safely as instructed		3	1	2
	PC16. remove sheathing material sequentially using proper tools and tackles to avoid damage to structure or sheathing materials		3	1	2
	PC17. remove formwork shutters manually or by mechanical means as per requirement basis shutter size		7	2	5
	PC18. ensure that all the small components are staked properly for further use		3	1	2

	PC19. replace/repair formwork material if required and ensure cleaning and proper staking after dismantling		3	1	2
	Total		100	30	70
CON/N0317: Assemble & dismantle system formwork for Pre-cast segments & form finished structures.	PC1. read and understand assembly drawings, work method statement	100	7		5
	PC2. read and interpret sketches related to fixing sequence and method for assembling moulds and frames		0	2	0
	PC3. check all materials, tools, details and procedure are available before assembling moulds or frames for pre-cast work		3	1	2
	PC4. position, assemble, prop & secure shutter panels as per approved workshop drawing and profile requirement		3	1	2
	PC5. apply release agent uniformly and completely as per method instructed		3	1	2
	PC6. fix all other accessories required for compacting concrete in case of external vibration if required				
	PC7. check for proper alignment and geometric accuracy of shutters				
	PC8. fix block out and cast-in-services as per marking and design requirement and check their positions after fixing		10	3	7
	PC9. check the assembly for rigidity				
	PC10. check and ensure joints for water tightness by providing form sheets or necessary packing material				
	PC11. fix build in components , void formers & box-outs and check for their positions as per drawings		7	2	5
	PC12. complete work within the allocated time and to quality		3	1	2
	PC13. report to superior for completion & checking of shuttering, do any rework as suggested by engineer in charge or superior, and get it approved		3	1	2
	PC14. dismantle moulds/frames sequentially		7	2	5
	PC15. use proper tools & tackles to ensure structure or sheathing material is not damaged		3	1	2
	PC16. check all tools, materials, components are available as per requirements		3	1	2
	PC17. check that form are free from spillages, rust marks and stains		3	1	2
PC18. check that formwork panels shall be of same size and forms a regular pattern	3	1	2		

	PC19. check that Holes left by formwork ties and components in concrete surfaces shall be in line horizontally and vertically and shall form a regular pattern		3	1	2
	PC20. check that chamfers are provided for all external angles of 90 degree		3	1	2
	PC21. check that joints between formwork panels are tightly sealed with foamed rubber strips		3	1	2
	PC22. check that gap between the panels and ensure it is not greater than 1 mm and the sealing strips shall not protrude of the surface of the formwork panels		3	1	2
	PC23. apply release agent uniformly and completely as per method instructed or as per form finished requirement		3	1	2
	PC24. position and set out formwork manually or by mechanical means as per instruction & requirement		3	1	2
	PC25. check profiling of shutters panels as per required shape of structure		7		5
	PC26. position & provide necessary support using props or other appropriate components based on system used		0	2	0
	PC27. check for proper alignment and geometric accuracy		0		0
	PC28. fix build in components , void formers & box-outs shall in positions as per drawings		3		2
	PC29. check the assembly for rigidity and joints between formwork panel, stop ends & adjoining concrete shall be tight and should not permit grout loss		0	1	0
	PC30. complete work within the allocated time and to quality		3		2
	PC31. report to superior for completion & checking of shuttering, do any rework as suggested by engineer in charge or superior, and get it approved		0	1	0
	PC32. dismantle moulds/frames sequentially		3	1	2
	PC33. use proper tools & tackles to ensure structure or sheathing material is not damaged		3	1	2
	Total		100	30	70
CON/N0318: Erect & dismantle jump form system	PC1. read and understand assembling drawings, work method statement	100	7	2	5
	PC2. check all tools, materials, components are available as per requirements		3	1	2
	PC3. fix marking, set out points and lines under superior instructions or check set out points are already provided for erection		7	2	5
	PC4. set out jump form system as per drawing		10	3	7

	PC5. erect and fixed into location form shutters as per drawing		10	3	7
	PC6. install shear key as per manufacture's specification		3	1	2
	PC7. fix platforms and assembly into core formworks as per manufacture's specification		10	3	7
	PC8. install hydraulic system, power units and accessories as per manufacturer specifications & standards form lifting purpose		3	1	2
	PC9. install penetration, block-out and cast in services as per drawing		10	3	7
	PC10. check that wall form shutter, working platform, lifting arrangement and other accessories are installed as per manufactures specifications		7	2	5
	PC11. complete work within the allocated time and to quality		3		2
	PC12. report to superior for completion & checking of shuttering, do any rework as suggested by engineer in charge or superior, and get it approved		0	1	0
	PC13. erect and install form shutters as per instructions or manufacturer specifications		7	2	5
	PC14. follow sequential steps to loose and stripped shutters		7	2	5
	PC15. pass on information to lift assembled system using cranes or hydraulic system to the new position		3	1	2
	PC16. install trailing platforms as per requirements		3	1	2
	PC17. dismantle jump form system as per instructions and manufactures specifications		7	2	5
	Total		100	30	70
CON/N8001: Work effectively in a team to deliver desired results at the workplace	PC1. pass on work related information/ requirement clearly to the team members	100	7	2	5
	PC2. inform co-workers and superiors about any kind of deviations from work		7	2	5
	PC3. address the problems effectively and report if required to immediate supervisor appropriately		10	3	7
	PC4. receive instructions clearly from superiors and respond effectively on the same		7	2	5
	PC5. communicate to team members/subordinates for appropriate work technique and method		10	3	7
	PC6. seek clarification and advice as per the requirement and applicability		7	2	5
	PC7. hand over the required material, tools tackles, equipment and work fronts timely to interfacing teams		27	8	19
	PC8. work together with co-workers in a synchronized manner		27	8	19



		Total	100	30	70
CON/N8002: Plan and organize work to meet expected outcomes	PC1. understand clearly the targets and timelines set by superiors	100	7	2	5
	PC2. plan activities as per schedule and sequence		7	2	5
	PC3. provide guidance to the subordinates to obtain desired outcome		10	3	7
	PC4. plan housekeeping activities prior to and post completion of work		7	2	5
	PC5. list and arrange required resources prior to commencement of work		10	3	7
	PC6. select and employ correct tools, tackles and equipment for completion of desired work		10	3	7
	PC7. complete the work with allocated resources		10	3	7
	PC8. engage allocated manpower in an appropriate manner		10	3	7
	PC9. use resources in an optimum manner to avoid any unnecessary wastage		10	3	7
	PC10. employ tools, tackles and equipment with care to avoid damage to the same		7	2	5
	PC11. organize work output, materials used, tools and tackles deployed,		7	2	5
	PC12. processes adopted to be in line with the specified standards and instructions		7	2	5
	Total	100	30	70	
CON/N9001: Work according to personal health, safety and environment protocol at construction site	PC1. identify and report any hazards, risks or breaches in site safety to the appropriate authorities	100	7	2	5
	PC2. follow emergency and evacuation procedures in case of accidents, fires, natural calamities		7	2	5
	PC3. follow recommended safe practices in handling construction materials, including chemical and hazardous material whenever applicable		10	3	7
	PC4. participate in safety awareness programs like Tool Box Talks, safety demonstrations, mock drills, conducted at site		7	2	5
	PC5. identify near miss , unsafe condition and unsafe act		7	2	5

PC6. use appropriate Personal Protective Equipment (PPE) as per work requirements including:				
<ul style="list-style-type: none"> • Head Protection (Helmets) • Ear protection • Fall Protection • Foot Protection • Face and Eye Protection • Hand and Body Protection • Respiratory Protection (if required) 	10	3	7	
PC7. handle all required tools, tackles , materials & equipment safely	7	2	5	
PC8. follow safe disposal of waste, harmful and hazardous materials as per EHS guidelines	7	2	5	
PC9. install and apply properly all safety equipment as instructed	13	4	9	
PC10. follow safety protocol and practices as laid down by site EHS department	13	4	9	
PC11. collect and deposit construction waste into identified containers before disposal, separate containers that may be needed for disposal of toxic or hazardous wastes	7	2	5	
PC12. apply ergonomic principles wherever required	7	2	5	
	Total	100	30	70