



Model Curriculum

Supervisor Erection

SECTOR: Construction
SUB-SECTOR: Real Estate and Infrastructure Construction
OCCUPATION: RIGGING
REF ID: CON/Q0709, V1.0
NSQF LEVEL: 6





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Supervisor Erection

CURRICULUM / SYLLABUS

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

Program Name	Supervisor Erection		
Qualification Pack Name & Reference ID. ID	CON/Q0709, v1.0		
Version No.	1.0	Version Update Date	14-08-2017
Pre-requisites to Training	Preferably 12th standard with 15 Years site experience in same occupation for Non trained worker/ 5 years site experience as a certified Foreman Erection for trained worker.		
Training Outcomes	<p>After completing this programme, participants will be able to:</p> <ul style="list-style-type: none"> • Prepare work plan for erection and ensure completion of preparatory work:- Provide required inputs for planning of lifting and erection and Supervise and ensure completion of preparatory works • Manage equipment, manpower involved in heavy lifting and erection work:- Ensure optimum utilization of material, equipment and manpower resources Brief lifting and erection teams on lifting plan, safe lifting • Supervise and monitor lifting operations as per agreed work plan:-Ensure lifting operations comply with agreed work plan • Supervise and ensure erection works in accordance with agreed work plan:- Ensure erection process is according to the work plan • Supervise, monitor and evaluate performance of subordinates at workplace:- Monitor all construction work activities performed by subordinates, evaluate their performance • Manage workplace for safe and healthy work environment :- Ensuring healthy and safe working environment for subordinates and effective implementation of health, safety and environment policies and procedures 		

This course encompasses 6 out of 6 National Occupational Standards (NOS) of “Supervisor Erection” Qualification Pack issued by “Construction”.

Sr. No.	Module	Key Learning Outcomes	Equipment Required
1	<p>Introduction</p> <p>Theory Duration (hh:mm) 8:00</p> <p>Practical Duration (hh:mm) 00:00</p> <p>Corresponding NOS Code Bridge Module</p>	<ul style="list-style-type: none"> Overview of construction industry and its contribution in economy of country Overview of Rigging occupation , job roles involved in the “Rigging occupation Job opportunities for a foreman-Erection and its career progression Brief about training session and training delivery plan Basic knowledge of Unit of measurement and their conversion Roles and Responsibilities of foreman-Erection 	<p>Classroom Requirement</p> <ol style="list-style-type: none"> Classroom of 30 students capacity Black/White board Projector/LED Monitor Computer Trade specific charts and other teaching aids
2	<p>Prepare work plan for erection and ensure completion of preparatory work</p> <p>Theory Duration (hh:mm) 100:00</p> <p>Practical Duration (hh:mm) 16:00</p> <p>OJT 90:00</p> <p>Corresponding NOS Code CON/N0728</p>	<p>Theory: -</p> <ul style="list-style-type: none"> Read and interpret structural drawings used in rigging operations Extraction of technical specifications from drawings related to erection work. Standard procedure of heavy lifting operations using lifting Equipments sequence of lifting and erection operation as per erection plan Standard code of practice used in lifting and rigging operations Arithmetic and basic geometry applicable to lifting and Erection Types of loads on erection operations Lifting equipment and lifting gear on erection operations Statutory requirement of heavy lifting cranes and their operators Means of communications during lifting and erection work competencies required from the personnel involved in the relevant operations physical and environmental conditions on heavy lifting and erection operation Documentation related to rigging operation such as filling up check lists, permits, preparation of reports etc. Documentation required to resource management such as preparation of indents, material 	<p>Hand tools</p> <ol style="list-style-type: none"> Spud Wrenches. Open-End Wrenches. Crescent Wrenches. Hammer Nibbler pliers Power tools Impact Wrench Drilling machine with bits Electric screw gun Electric hexa saw <p>Measuring tools</p> <ol style="list-style-type: none"> Measuring tape Plumb Bob Spirit level Chalks line Try square Water level <p>Equipments and Machinery</p> <ol style="list-style-type: none"> Tower crane Mobile crane Forklift Scissor lift Hydraulic jacks Electric Wire Rope Hoist Electrical winch Electrical chain hoist <p>Lifting accessories</p> <ol style="list-style-type: none"> Belts Slings Wire ropes Shackles Spreader board

Sr. No.	Module	Key Learning Outcomes	Equipment Required
		<p>and manpower calculation, preparation of daily Labour reports</p> <p>Demonstration/ practical: -</p> <ul style="list-style-type: none"> • Determine and list out work activities in load erection work as per GFC drawing requirements • Estimate duration and time required for identified key activities in rigging Work • Determine requirement of manpower to complete works as per erection work schedule • Assess type and capacity of lifting equipment to be used as per nature of lifting/ load to be lifted • Determine method of lifting, route and mode of transportation of structural elements from stock yard to erection point • Prepare indent for required material, tools and tackles as per requirement and instruction • check and carry out required measurements to erection base for designed area of bearing, embedded anchor bolts, insert plates or any other relevant provisions according to drawing or specification • supervise base preparation for lifting Equipments • check for license of operators and certificates relevant to statutory requirements of Equipments to be used 	<p>30.Chain 31.Link 32.Eye hook 33.Eye bolts 34.Bull dog grips 35.Clamp 36.socket</p> <p>Safety instruments 37.Safety Helmet 38.Safety goggles 39.Safety shoes 40.Safety belt 41.Cotton gloves 42.Ear plugs 43.Reflective jackets 44.Dust mask 45.Fire Prevention kit 46.Barricade tape 47.Safety Tags</p>
3	<p>Manage equipment, manpower involved in heavy lifting and erection work</p> <p>Theory Duration (hh:mm) 120:00</p> <p>Practical Duration (hh:mm)</p>	<p>Theory: -</p> <ul style="list-style-type: none"> • Method to calculate productivity of equipment used in rigging works • Standard procedure of signaling using hand and communication devices • job requirement and level of competencies required from a worker to execute specific works 	<p>Hand tools</p> <ol style="list-style-type: none"> 1. Spud Wrenches. 2. Open-End Wrenches. 3. Crescent Wrenches. 4.Hammer 5.Nibbler 6.pliers <p>Power tools</p> <ol style="list-style-type: none"> 7.Impact Wrench

Sr. No.	Module	Key Learning Outcomes	Equipment Required
	<p>16:00 OJT (hh:mm) 104:00</p> <p>Corresponding NOS Code CON/N0729</p>	<ul style="list-style-type: none"> • How to communicate efficiently to achieve desired outcome form a team • Reporting procedure as per organizational norms • Scope of work and timelines to be met according to agreed lifting and erection plan • Commonly used rigging gears for heavy material lifting and their respective uses • Safe working load, selection and method of inspecting lifting gears for their usability • Hazards and risk associated with lifting and erection operation their evaluation and risk control measures <p>Demonstration/ practical: -</p> <ul style="list-style-type: none"> • Monitor operation of lifting equipment and keep track of runtime, idle time and break down of cranes • Instruct concerned authorities, equipment operators for starting and stopping lifting works as per daily work plan • Monitor signaling and material movement by Equipments to meet timeline and equipment productivity • Allocate manpower to respective activities on the basis of work requirement • Ensure productivity of manpower by providing instruction, checking completed works as per drawing and reporting to senior authorities • Report efficiently to the concerned authorities for equipment breakdown, discrepancies found in the jobs • Provide direction for reporting procedure to be maintained during activity and under emergency situations • Demonstrate Effective standard procedure of using rigging gears while lifting heavy loads by Equipments 	<p>8. Drilling machine with bits</p> <p>9. Electric screw gun</p> <p>10. Electric hexa saw</p> <p>Measuring tools</p> <p>11. Measuring tape</p> <p>12. Plumb Bob</p> <p>13. Spirit level</p> <p>14. Chalks line</p> <p>15. Try square</p> <p>16. Water level</p> <p>Equipments and Machinery</p> <p>17. Tower crane</p> <p>18. Mobile crane</p> <p>19. Forklift</p> <p>20. Scissor lift</p> <p>21. Hydraulic jacks</p> <p>22. Electric Wire Rope Hoist</p> <p>23. Electrical winch</p> <p>24. Electrical chain hoist</p> <p>Lifting accessories</p> <p>25. Belts</p> <p>26. Slings</p> <p>27. Wire ropes</p> <p>28. Shackles</p> <p>29. Spreader board</p> <p>30. Chain</p> <p>31. Link</p> <p>32. Eye hook</p> <p>33. Eye bolts</p> <p>34. Bull dog grips</p> <p>35. Clamp</p> <p>36. socket</p> <p>Safety instruments</p> <p>37. Safety Helmet</p> <p>38. Safety goggles</p> <p>39. Safety shoes</p> <p>40. Safety belt</p> <p>41. Cotton gloves</p> <p>42. Ear plugs</p> <p>43. Reflective jackets</p> <p>44. Dust mask</p> <p>45. Fire Prevention kit</p> <p>46. Barricade tape</p> <p>47. Safety Tags</p>

Sr. No.	Module	Key Learning Outcomes	Equipment Required
4	<p>Supervise and monitor lifting operations as per agreed work plan Theory Duration (hh:mm) 108:00</p> <p>Practical Duration (hh:mm) 18:00</p> <p>OJT (hh:mm) 92:00</p> <p>Corresponding NOS Code CON/N0730</p>	<p>Theory: -</p> <ul style="list-style-type: none"> • Method to calculate productivity of equipment used in rigging works • standard procedure of signaling using hand and communication devices • job requirement and level of competencies required from a worker to execute specific works • how to communicate efficiently to achieve desired outcome form a team • Reporting procedure as per organizational norms • scope of work and timelines to be met according to agreed lifting and erection plan • commonly used rigging gears for heavy material lifting and their respective uses • safe working load, selection and method of inspecting lifting gears for their usability • hazards and risk associated with lifting and erection operation their evaluation and risk control measures <p>Demonstration/ practical (D/P): -</p> <ul style="list-style-type: none"> • Monitor operation of lifting equipment and keep track of runtime, idle time and break down of cranes • Instruct concerned authorities, equipment operators for starting and stopping lifting works as per daily work plan • Monitor signaling and material movement by Equipments to meet timeline and equipment productivity • Allocate manpower to respective activities on the basis of work requirement • Ensure productivity of manpower by providing instruction, checking completed works as per drawing and reporting to senior authorities 	<p>Hand tools</p> <ol style="list-style-type: none"> 1. Spud Wrenches. 2.Open-End Wrenches. 3.Crescent Wrenches. 4.Hammer 5.Nibbler 6.pliers <p>Power tools</p> <ol style="list-style-type: none"> 7.Impact Wrench 8.Drilling machine with bits 9.Electric screw gun 10.Electric hexa saw <p>Measuring tools</p> <ol style="list-style-type: none"> 11.Measuring tape 12.Plumb Bob 13.Spirit level 14.Chalks line 15.Try square 16.Water level <p>Equipments and Machinery</p> <ol style="list-style-type: none"> 17.Tower crane 18.Mobile crane 19.Forklift 20.Scissor lift 21.Hydraulic jacks 22.Electric Wire Rope Hoist 23.Electrical winch 24.Electrical chain hoist <p>Lifting accessories</p> <ol style="list-style-type: none"> 25.Belts 26.Slings 27.Wire ropes 28.Shackles 29.Spreader board 30.Chain 31.Link 32.Eye hook 33.Eye bolts 34.Bull dog grips 35.Clamp 36.socket <p>Safety instruments</p> <ol style="list-style-type: none"> 37.Safety Helmet

Sr. No.	Module	Key Learning Outcomes	Equipment Required
		<ul style="list-style-type: none"> Report efficiently to the concerned authorities for equipment breakdown, discrepancies found in the jobs 	38.Safety goggles 39.Safety shoes 40.Safety belt 41.Cotton gloves 42.Ear plugs 43.Reflective jackets 44.Dust mask 45.Fire Prevention kit 46.Barricade tape 47.Safety Tags
5	<p>Supervise and ensure erection works in accordance with agreed work plan</p> <p>Theory Duration (hh:mm) 106:00</p> <p>Practical Duration (hh:mm) 00:00</p> <p>OJT 106:00</p> <p>Corresponding NOS Code CON/N0731</p>	<p>Theory: -</p> <ul style="list-style-type: none"> Standard practices for rigging work Service request procedures for tools, materials and Equipments Standard procedure for heavy load lifting operations using lifting Equipments Sequence of lifting and erection operation as per agreed erection plan Statutory compliance requirements related to working at height Statutory compliance requirement related to workmen engagement Approved code of practice related load lifting and rigging operations Factors to be considered while selecting heavy lifting Equipments Ideal position of lifting equipment while lifting heavy loads as per manufacturer's specification and standard practice Commonly used rigging gears for heavy material lifting and their respective uses safe working load, selection and method of inspecting lifting gears for their usability Sequence of lifting activities as per agreed work plan How to read and interpret load chart and its implementation while lifting heavy loads Standard procedure of signaling using hand and communication devices How to communicate efficiently to achieve desired outcome form a team Weathering effects which has direct influence on lifting and erection operations such as rain, heavy wind flow, storm etc. <p>Demonstration/ Practical (D/P) :-</p> <ul style="list-style-type: none"> Ensure timely completion of the erection activity on daily basis 	

Sr. No.	Module	Key Learning Outcomes	Equipment Required
		<ul style="list-style-type: none"> • Coordinate with respective departments for required supporting activities to achieve smooth erection work • Ensure adequate illumination at the location of erection • Ensure proper location, elevation and alignment of erected structural components are as per drawing and specification and within limit of tolerance • Ensure joining activities such as bolting, riveting welding are being carried out as per specifications and checked by respective authorized personnel • Monitor weather and wind speed and stop work in adverse condition in consultation of subordinate workmen and superior authority • Trouble shoot if any critical situation arises and report to senior authority if cannot be resolved • keep records of work stoppage, Labour report, force majeure and report it to senior authority as per company norms • Ensure presence and efficient use of PPEs, work permits and work relevant safety devices at work area • Ensure appropriate erection in structural steel bridge construction works using strand jack • check for positioning of anchor plates at steel assembly to be erected • check for proper locking of strands in to specified locations in order to pull assembly safely • ensure that optimum torque is provided for locking of strands • carry out visual inspection for rigidity of guiderails provided • ensure adequate number and thickness of bearing pads prior to exposing the structure to load • check displacements of structural assembly periodically at appropriate intervals as per work method statement • provide appropriate direction during pulling to equipment operators to ensure its appropriate location, alignment as per drawing 	

Sr. No.	Module	Key Learning Outcomes	Equipment Required
6	<p>Supervise, monitor and evaluate performance of subordinates at workplace</p> <p>Theory Duration (hh:mm) 18:00</p> <p>OJT (hh:mm) 18:00</p> <p>Corresponding NOS Code CON/N8003</p>	<p>Theory: -</p> <ul style="list-style-type: none"> • policies, procedures and work targets for performance evaluation and appraisals • Organizational policies, procedures and protocol for smooth completion of work at the respective workplace • how to complete work/task accurately by following standard specifications and procedures by optimized and correct used of materials , tools, tackles and equipment <p>Demonstration/ Practical (D/P) :-</p> <ul style="list-style-type: none"> • Fix expected targets for the respective gang as per site requirements and allocate work to subordinates • Establish expected performance standards and expectations for the respective gang of workers to meet the desired outcomes • Inspect assigned work to the respected gang of workers through progressive checking • Observe and verify the work activities performed by the subordinates at the construction site • Monitor overall performance of subordinates on the designed measures to ensure quality requirements set by the concerned authority • Ensure adherence to the organizational policies and procedures for all relevant construction activities by the workmen subordinations 	
7	<p>Manage workplace for safe and healthy work environment</p> <p>Theory Duration (hh:mm) 40:00</p> <p>OJT (hh:mm) 40:00</p>	<p>Theory: -</p> <ul style="list-style-type: none"> • The policies, procedures and protocol set up by the EHS Department With respect to Health , Safety and environment at the respective construction site • Reporting procedures in cases of breaches or hazards in site safety, accidents or emergency situations • Safe working practices for tools, tackles and equipment 	<p>1.Safety Helmet 2.Safety goggles 3.Safety shoes 4.Safety belt 5.Cotton gloves 6.Ear plugs 7.Reflective jackets 8.Dust mask 9.Fire Prevention kit Barricade tape 11.Safety Tags</p>

Sr. No.	Module	Key Learning Outcomes	Equipment Required
	<p>Corresponding NOS Code CON/N9002</p>	<ul style="list-style-type: none"> • Emergency Response system and protocol. • The appropriate personal protective equipment to be used based on various working condition in Rigging work • Safe Working practices while doing rigging work. <p><u>Demonstration/ Practical: -</u></p> <ul style="list-style-type: none"> • Ensure effective adherence to response to emergency procedures / protocols • Implement control measures to reduce risk & meet legal requirement as per organizational policies • Follow procedures for accident recording and reporting as per organizational and statutory requirements • Identify any hazard in workplace and notify them to appropriate authority • Ensure that health and safety plan is followed by all subordinates • Ensure safe use of tools and tackles by the workmen as per applicability • Demonstrate the use of fire protection Equipments for different type of fire Hazard • Ensure appropriate use of Personal Protective Equipment (PPE) as per applicability • Maintain entrances & exit from confined spaces , excavated pits and other location in concurrence with safety parameters or instruction form safety personals 	

Sr. No.	Module	Key Learning Outcomes	Equipment Required
	<p>Total Duration</p> <p>Theory Duration 500:00</p> <p>Practical Duration 50:00</p>	<p>Unique Equipment Required: Classroom Requirement Classroom of 30 students capacity, Black/White board, Projector/LED Monitor, Computer, Trade specific charts and other teaching aids Hand Tools Open-End Wrenches, Fixed wrenches, adjustable Wrenches, Hammer, Nibbler, pliers Power tools Impact Wrench, Drilling machine with bits, Electric screw gun, Electric hexa saw Measuring Instruments Measurement Tape, Chalk line/masons line, Water level, Spirit level, Plumb bob, Material and consumables Equipments required Tower crane Mobile crane Forklift Scissor lift Hydraulic jacks Electric Wire Rope Hoist Electrical winch Electrical chain hoist Safety Instrument Safety Helmet, Safety goggles, Safety shoes, Safety belt, Cotton gloves, Ear plugs, Reflective jackets, Dust mask, Fire Prevention kit, Barricade tape, Safety Tags</p>	

Grand Total Course Duration: **1000hours, 0 Minutes**
Including Mandatory 450 hours of OJT (project site experience)}

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

Trainer Prerequisites for Job role: “Supervisor Erection” mapped to Qualification Pack: “CON/Q0709, 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/Q0709”.
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	ITI/12th
4a	Domain Certification	Trainer/Assessor-50% in each NOS & 80% overall, Lead trainer/ Lead Assessors- 50% in each NOS and overall 90%
4b	Platform Certification	Trainer/Assessor-80% in each NOS and Lead trainer/Lead Assessors- 90% in each NOS
5	Experience	<ul style="list-style-type: none"> 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/12th pass minimum eight years of field experience and preferably two years of teaching Experience.



CRITERIA FOR ASSESSMENT OF TRAINEES

<u>Job Role</u>	Supervisor Erection
<u>Qualification Pack</u>	CON/Q0709
<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/N0728: Prepare work plan for erection and ensure completion of preparatory work	PC1. identify work activities as per GFC drawing requirements and report to concerned superior	100	10	5	5
	PC2. assist engineer in sequencing key activities related to lifting and erection for making schedule		8	4	4
	PC3. assist engineer in planning of duration and time require for identified key activities		8	4	4
	PC4. determine requirement of manpower to complete works in accordance with lifting and erection work schedule		6	3	3
	PC5. ascertain type and capacity of lifting equipment to be used as per nature of lifting/ load to be lifted		8	4	4
	PC6. provide inputs to concerned engineer regarding requirements for manpower, tools, and materials as per work requirements		6	3	3
	PC7. determine method of lifting, route and mode of transportation of structural elements from stock yard to erection point		6	3	3
	PC8. determine resources to be used in accordance with safety practices to be observed during material lifting, shifting and erection operations		6	3	3
	PC9. prepare indent for required material, tools and tackles as per requirement and instruction		6	3	3
	PC10. ensure proper survey points are available at respective locations for erection		4	2	2
	PC11. check and carry out required measurements to erection base for designed area of bearing, embedded anchor bolts, insert plates or any other relevant provisions according to drawing or specification		6	3	3
	PC12. ensure shifting of structural elements from yard to lifting points in accordance with lifting plan		4	2	2
	PC13. supervise base preparation for lifting equipments and ensure completion of all other relevant works		4	2	2
	PC14. ensure erection of relevant safety arrangement such as signage, barricading at specified work locations as per work safety plan		6	3	3
	PC15. check for license of operators and certificates relevant to statutory requirements of equipments to be used		6	3	3

	PC16. deal with client, superior and subordinate as and when required		6	3	3
		Total	100	50	50
CON/N0729: Manage equipment, manpower involved in heavy lifting and erection work	PC1. monitor operation of lifting equipment and keep track of runtime, idle time and break down of cranes	100	10	5	5
	PC2. instruct concerned authorities, equipment operators for starting and stopping lifting works as per daily work plan		6	3	3
	PC3. monitor signaling and material movement by equipments to meet timeline and equipment productivity		10	5	5
	PC4. allocate manpower to respective activities on the basis of work requirement		10	5	5
	PC5. ensure productivity of manpower by providing instruction, checking completed works as per drawing and reporting to senior authorities		10	5	5
	PC6. report efficiently to the concerned authorities for equipment breakdown, discrepancies found in the jobs		8	4	4
	PC7. brief about scope and timelines to be adhered for respective activities		8	4	4
	PC8. describe about rigging gears to be used in material lifting operations and standard procedure for checking the same		6	3	3
	PC9. describe standard procedure of using rigging gears while lifting heavy loads by equipments		10	5	5
	PC10. provide information about hazards and risks involved in heavy lifting and erection operations		8	4	4
	PC11. provide direction regarding PPEs to be used during lifting and erection operations by respective gangs		4	2	2
	PC12. brief about standard hand signaling procedure to be adhered and use of communication devices during material handling		6	3	3
	PC13. provide direction for reporting procedure to be maintained during activity and under emergency situations		4	2	2
			Total	100	50
CON/N0730: Supervise and monitor lifting operations as per agreed work plan	PC1. ensure that the equipment being used for lifting is as per plan, specifications and meets following required purpose <ul style="list-style-type: none"> Adequate capacity of lifting Height and distance to be covered for erection 	100	24	12	12

	<ul style="list-style-type: none"> Number of lift possible within specified time duration Period of time for the lifting operation Suitability of working on the available base Provision for extending boom length 				
	PC2. ensure that only registered crane operators, appointed riggers and appointed signalmen participate in respective operations involving the use of mobile and tower cranes		8	4	4
	PC3. ensure load lifting equipments are in appropriate working position as per standard practice for load lifting operations		8	4	4
	PC4. ensure safe distance of lifting equipments from existing structures, live electrical cables, service lines and stability of its outriggers		6	3	3
	PC5. ensure proper use of rigging gears and their usability for lifting		8	4	4
	PC6. ensure proper sequence is followed for continuous lifting process		8	4	4
	PC7. read, interpret and adhere manufacturer's specification and load chart provided for lifting equipment while undertaking lifting operations		10	5	5
	PC8. monitor and ensure effective signalling procedure while carrying out heavy lifting operations		8	4	4
	PC9. monitor, supervise and provide direction to the subordinates for safe and effective lifting operation as per work requirement		8	4	4
	PC10. monitor weather and wind speed and stop work in adverse condition in consultation of subordinate workmen and superior authority		6	3	3
	PC11. ensure adequate illumination is provided and they are functioning properly at lifting area		6	3	3
		Total	100	50	50
CON/N0731: Supervise and ensure erection works in accordance with agreed work plan	PC1. ensure timely completion of the erection activity on daily basis	100	6	3	3
	PC2. coordinate with respective departments for required supporting activities to achieve smooth erection work		10	5	5
	PC3. ensure adequate illumination at the location of erection		4	2	2
	PC4. ensure proper location, elevation and alignment of erected structural components are as per drawing and specification and within limit of tolerance		10	5	5

	PC5. ensure joining activities such as bolting, riveting welding are being carried out as per specifications and checked by respective authorised personnel		10	5	5
	PC6. monitor weather and wind speed and stop work in adverse condition in consultation of subordinate workmen and superior authority		6	3	3
	PC7. trouble shoot if any critical situation arises and report to senior authority if cannot be resolved		10	5	5
	PC8. keep records of work stoppage, labour report, force majeure and report it to senior authority as per company norms		10	5	5
	PC9. ensure presence and efficient use of PPEs, work permits and work relevant safety devices at work area		4	2	2
	PC10. check for positioning of anchor plates at steel assembly to be erected		4	2	2
	PC11. check for proper locking of strands in to specified locations in order to pull assembly safely		4	2	2
	PC12. ensure that optimum torque is provided for locking of strands		4	2	2
	PC13. carry out visual inspection for rigidity of guiderails provided		4	2	2
	PC14. ensure adequate number and thickness of bearing pads prior to exposing the structure to load		4	2	2
	PC15. check displacements of structural assembly periodically at appropriate intervals as per work method statement		4	2	2
	PC16. provide appropriate direction during pulling to equipment operators to ensure its appropriate location, alignment as per drawing		6	3	3
		Total	100	50	50
CON/N8003: Supervise, monitor and evaluate performance of subordinates at workplace	PC1. fix expected targets for the respective gang as per site requirements and allocate work to subordinates	100	15	7.5	7.5
	PC2. establish expected performance standards and expectations for the respective gang of workers to meet the desired outcomes		15	7.5	7.5
	PC3. inspect assigned work to the respected gang of workers through progressive checking		20	10	10
	PC4. observe and verify the work activities performed by the subordinates at the construction site		20	10	10
	PC5. monitor overall performance of subordinates on the designed measures to ensure quality requirements set by the concerned authority		15	7.5	7.5



	PC6. ensure adherence to the organizational policies and procedures for all relevant construction activities by the workmen subordinations		15	7.5	7.5
		Total	100	50	50
CON/N9002: Manage workplace for safe and healthy work environment	PC1. ensure proper housekeeping at workplace		5	2.5	2.5
	PC2. implement safe handling , stacking methods at workplace / store		5	2.5	2.5
	PC3. insure that health and safety plan is followed by all subordinates		5	2.5	2.5
	PC4. identify any hazard in workplace and notify them to appropriate authority		5	2.5	2.5
	PC5. ensure that all safety and protection installation are correctly placed & adequate		5	2.5	2.5
	PC6. ensure safe access is available at work place for movement of workers & materials		5	2.5	2.5
	PC7. ensure safe use of tools and tackles by the workmen as per applicability		5	2.5	2.5
	PC8. ensure appropriate use of following Personal Protective Equipment (PPE) as per applicability:		10	5	5
	• 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 form safety personals.		5	2.5	2.5	
PC10. ensure organizational policies and procedures are followed for health , safety and welfare, in relation to:		10	5	5	
• methods of receiving or sourcing information					
• dealing with accidents and emergencies associated with the work and environment					
• reporting					
• stopping work					
• evacuation					
		100			



	<ul style="list-style-type: none"> fire risks and safe exit procedures 				
	PC11. follow procedures for accident recording and reporting as per organizational and statutory requirements		5	2.5	2.5
	PC12. ensure effective adherence to response to emergency procedures / protocols		7.5	3.75	3.75
	PC13. report any case of emergency / risks to the concern people at the construction site		7.5	3.75	3.75
	PC14. report any perceived risk hazards to the superiors / concerned EHS		7.5	3.75	3.75
	PC15. demonstrate the use of fire protection equipments for different type of fire hazard		7.5	3.75	3.75
	PC16. implement control measures to reduce risk & meet legal requirement as per organizational policies		5	2.5	2.5
		Total	100	50	50