









Model Curriculum

QP Name: Associate Scaffolder - System

QP Code: CON/Q0316

QP Version: 1.0

NSQF Level: 3

Model Curriculum Version: 1.0

Construction Skill Development Council of India | | Construction Skill Development Council of India (CSDCCI), CPB – 103 & 104, Block-4B, DLF corporate Park, Phase – III, MG Road Gurugram – 122002 Near Guru Dronacharya Metro Station









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Training Parameters

Sector	Construction Skill Development Council of India
Sub-Sector	Real Estate and Infrastructure Construction
Occupation	Construction Painting
Country	India
NSQF Level	3
Aligned to NCO/ISCO/ISIC Code	NCO-2015/7131.0101
Minimum Educational Qualification and Experience	Grade 9 or Grade 8 with one year of (NTC/ NAC) after 8th or 8th grade pass with 1 year relevant experience or 5th Grade Pass with 4 years of relevant experience or Previous relevant Qualification of NSQF Level 2 with 1 year relevant experience or Previous relevant Qualification of NSQF Level 2.5 with 6 months relevant experience
Pre-Requisite License or Training	NA
Minimum Job Entry Age	18 Years
Last Reviewed On	N/A
Next Review Date	N/A
NSQC Approval Date	N/A
QP Version	Version number 1.0
Model Curriculum Creation Date	15/02/2023
Model Curriculum Valid Up to Date	15/08/2023
Model Curriculum Version	Version number 1.0
Minimum Duration of the Course	210 hrs
Maximum Duration of the Course	210 hrs









Program Overview

This section summarizes the end objectives of the program along with its duration.

Training Outcomes

At the end of the program, the learner should have acquired the listed knowledge and skills.

- Carry out preparatory works, erection and dismantling of pipe and coupler scaffold
- Carry out preparatory works and erection and dismantling of various customized scaffolds
- Interact and communicate effectively with co-workers, superiors and sub-ordinates across different teams
- Follow safety norms as defined by organization, adopt healthy and safe work practices

Compulsory Modules

The table lists the modules and their duration corresponding to the Compulsory NOS of the QP.

NOS and Module Details	Theory Duration	Practical Duration	On-the-Job Training Duration (Mandatory)	On-the-Job Training Duration (Recommended)	Total Duration
CON/N0354 Assist in erection and dismantling of scaffold using pipe and coupler NOS Version No. 3.0 NSQF Level 3	13:30 hrs	31:30			45:00 hrs
Assist in erection and dismantling of scaffold using pipe and coupler	13:30 hrs	31:30			45:00 hrs
CON/N0355 Assist in erection and dismantling of common customized system scaffold NOS Version No. 3.0 NSQF Level 3	13:30 hrs	31:30			45:00 hrs
Assist in erection and dismantling of common customized system scaffold	13:30 hrs	31:30			45:00 hrs
CON/N8001 Work effectively in a team to deliver desired results at the work place NOS Version No.1.1 NSQF Level 3	09:00 hrs	21:00			30:00 hrs
Interact and communicate effectively with co-workers, superiors and sub-	09:00 hrs	21:00			30:00 hrs









		MINISTRY OF SKILL	DEVELOPMENT	Skill India	Transforming the skill
ordinates across different teams			100000		
CON/N8002 Plan and organize work to meet expected outcomes NOS Version No. 1.0 NSQF Level 3	09:00 hrs	21:00			30:00 hrs
Prioritise activities and organise resources	09:00 hrs	21:00			30:00 hrs
CON/N9001 Work according to personal health, safety and environment protocol at construction site NOS Version No.1.4 NSQF Level 3	09:00 hrs	21:00			30:00 hrs
Follow safety norms as defined by organization, adopt healthy and safe work practices	09:00 hrs	21:00			30:00 hrs
DGT/VSQ/N0101: Employability Skills (30 Hours) NOS Version No.1.0 NSQF Level 3	30:00 hrs	00:00			30:00 hrs
Employability Skills	30:00 hrs	00:00			30:00 hrs
Total Duration	84:00 hrs	126:00 hrs			210:00 hrs









Module Details

Module 1: Assist in erection and dismantling of scaffold using pipe and coupler

Mapped to CON/N0354

Terminal Outcomes:

Carry out preparatory works, erection and dismantling of pipe and coupler scaffold

Duration: 13:30	Duration: 31:30
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
 List the various materials, tools and equipment used in pipe and coupler scaffolding along with their standard sizes Explain the applications various materials, tools and equipment used in pipe and coupler scaffolding Explain the process of stacking and storing materials used in pipe and coupler scaffolding work Explain application of slings, shackles, and belts for lifting and shifting of scaffold materials Explain common defects in pipes and couplers Describe criteria for selection of pipes, swivel coupler, right angle coupler etc. based upon types of work Describe the sequence and standard procedure for erection of scaffold using pipes and couplers Describe importance of providing supports to scaffold Describe the measures taken for protection of work and work area Discuss standard procedure for erection and dismantle of pipe and coupler scaffold Summarize knowledge about upkeep, repair and maintenance of tools. 	 Use different measuring, marking and leveling tools for scaffold erection works Identify the common defects in pipes and couplers Demonstrate preparation of base for pipe and coupler scaffolding work Demonstrate the preparatory works for scaffold erection including marking and transferring of levels. Demonstrate the erection of pipe and coupler scaffold in single and double staging up to the specified height Demonstrate checks for alignment as per instruction Demonstrate the process of providing support in a pipe and coupler scaffolding works Demonstrate the dismantling of pipe and coupler scaffold in single and double staging up to the specified height

Computer, printer, projector, white board/ flip chart, marker and duster

Tools, Equipment and Other Requirements

Podge spanner, Ring spanner, Open end spanner, Claw hammer, Mash hammer, Vernier caliper, Hack saw blade with frame, Line string, Knife, Wheel pulley, Drilling machine, H frame, Cross bracings, Extension pipe, Sole board, MS pipe 50mm OD, 4mm thick, MS pipe 50mm OD, 4mm thick, MS pipe 50mm OD, 4mm thick, Swivel coupler, Rigid coupler, Putlog coupler, Sleeve coupler, Stairway set (including all components), Toe board, Wooden planks, Staircase tower scaffold with components (as per manufacturer), Mobile tower scaffold with components (as per manufacturer), Lifting appliances (wheel and rope), Wheel barrows, Safety Net, Steel scale, Try square, Spirit level, Plumb bob, Measuring tape, Consumable, Helmet, Face shield, Safety goggles, Safety shoes, Safety belt, Ear defenders, Particle masks, Overalls, Knee pad, Reflective jackets, Pencil









Module 2: Assist in erection and dismantling of common customized system scaffold

Mapped to CON/N0355

Terminal Outcomes:

- Demonstrate preparation of paint mix using various constituents as per instructions.
- Demonstrate application of paint to produce film of uniform thickness on masonry, wood and metal surfaces as per specifications and instructions.

Duration: 13:30	Duration: 31:30
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
 Explain the different types of customized scaffolds Explain the application of various types of customized scaffolds List the customized scaffolds along with their standard sizes Explain the application of customized scaffolds Define the process of stacking and storing of various materials based upon work requirements. Explain process of preparation of base Describe the measures taken for protection of work and work area Define the criteria for selection of components, tools and equipment etc. as per the types of work Explain the standard procedure for erection of scaffold using in various customized scaffolds Discuss importance of providing supports to scaffolds Discuss the upkeep, repair and maintenance of tools 	 Demonstrate application of slings, shackles, and belts for lifting and shifting of scaffold materials Use measuring, marking and levelling tools Describe common defects in components Identify common defects in components of customised scaffold Demonstrate preparation of base for customized scaffolds Demonstrate the erection of customized scaffolds up to specified height Demonstrate checks for alignment of scaffold as per instruction Demonstrate the process of providing support in customized scaffolds Demonstrate the dismantling of customized scaffolds

Classroom Aids:

Computer, printer, projector, white board/flip chart, marker and duster

Tools, Equipment and Other Requirements

Podge spanner, Ring spanner, Open end spanner, Claw hammer, Mash hammer, Vernier caliper, Hack saw blade with frame, Line string, Knife, Wheel pulley, Drilling machine, H frame, Cross bracings, Extension pipe, Sole board, MS pipe 50mm OD, 4mm thick, MS pipe 50mm OD, 4mm thick, MS pipe 50mm OD, 4mm thick, Swivel coupler, Rigid coupler, Putlog coupler, Sleeve coupler, Stairway set (including all components), Toe board, Wooden planks, Staircase tower scaffold with components (as per manufacturer), Mobile tower scaffold with components (as per manufacturer), Lifting appliances (wheel and rope), Wheel barrows, Safety Net, Steel scale, Try square, Spirit level, Plumb bob, Measuring tape, Consumable, Helmet, Face shield, Safety goggles, Safety shoes, Safety belt, Ear defenders, Particle masks, Overalls, Knee pad, Reflective jackets, Pencil









Module 3: Interact and communicate effectively with co-workers, superiors and sub-ordinates across different teams Mapped to CON/N8001

Terminal Outcome:

- Demonstrate effective communication with co-workers, superiors and sub-ordinates across different teams.
- Provide support to co-workers, superiors and sub-ordinates within the team and across interfacing teams to ensure effective execution of assigned task.

Duration: <i>09:00</i>	Duration: 21:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
 Interpret work sketches construction painting works formats, permits, protocols, checklists etc. Interpret scope of construction painting works. Explain effect and benefit of timely actions relevant to construction painting works with examples. Explain importance of team work and its effects relevant to construction painting works with examples. Explain importance of proper and effective communication and its adverse effects in case of failure of proper communication. 	 Demonstrate effective communication skills while interacting with co-workers and trade seniors during the assigned task. Demonstrate effective reporting to seniors as per applicable organisational norms. Instruct subordinates in a clear and precise manner with respect to construction painting works. Demonstrate team work during assigned task.
Classroom Aids:	
Black/White board, marker, Projector/LED Monit	or, Computer, Trade specific charts, Safety tags,
Safety Notice board, registers and other teaching	; aids
Tools, Equipment and Other Requirements	
N/A	









Module 4: Prioritise activities and organise resources Mapped to CON/N8002

Terminal Outcomes:

- Demonstrate prioritizing of work activities to achieve the desired productivity.
- Demonstrate organizing of resources as per work plan prior to commencement of work.

Duration : 09:00	Duration: 21:00		
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes		
 Explain methods to upkeep, store and stack tools, materials used for domain specific works. Explain the process of planning of the given tasks and activities relevant to the trade/job role within defined scope and duration. Explain the procedure adopted for prioritizing an activity and sequencing of activities. Explain the work plan and flow of activities in sequence for the assigned work. Explain basic concept of labour productivity and work productivity. Explain requisition of resources, reporting for requirement of resources orally and in written to concerned authority. Explain how to minimise wastage of resources. Explain the plan for waste collection and disposal after task. 	 Identify the work target and plan activities to achieve the desired productivity. Demonstrate requisition of resource citing an example. Demonstrate the planning for various activities relevant to task as per the scope and schedule. Demonstrate how to organise the required tool, manpower and material resources for the assigned task. Select required quantity of materials, tools or devices for defined work activities. Demonstrate how to prioritize all works/activities to maximise output. Demonstrate optimum use of resources while performing domain specific work activities. Demonstrate waste collection and disposal as per organisational norms. Demonstrate completion of work within stipulated time and plan. 		
Classroom Aids:			

Black/White board, marker, Projector/LED Monitor, Computer, Trade specific charts, Safety tags, Safety Notice board, registers and other teaching aids

Tools, Equipment and Other Requirements

N/A









Module 5: Follow safety norms as defined by organization, adopt healthy and safe work practices Mapped to CON/N9001

Terminal Outcome:

- Identify various hazards at construction site.
- Use PPE's relevant to construction painting task.
- Perform safe waste disposal at construction site.

Theory – Key Learning OutcomesPractical – Key Learning• Explain the types of hazards at the• Demonstrate the operation	
	ating procedure of
construction sites and identify the hazards specific to the scaffolding work. Recall the safety control measures and actions to be taken under emergency situation. Explain the classes of fire and types of fire extinguishers. Explain the importance of participation of workers in safety drills. Explain the reporting procedure to the concerned authority in case of emergency situations. Describe the standard procedure for handling, storing and stacking of material, tools, equipment and accessories. Explain different types of waste generated at construction site including their disposal method. Explain the purpose and importance of vertigo test. List out basic medical tests required for working at construction site. Explain the types and benefits of basic ergonomic principles, which should be adopted while carrying out specific task at the construction sites. Explain the importance of housekeeping works.	ne affected person equirements during ob. est. te disposal practices on site.

Classroom Aids:

Computer, printer, projector, white board/ flip chart, marker and duster

Tools, Equipment and Other Requirements

Safety Helmets, Face shield, Overalls, Knee pads, Safety shoes, Safety belts, Safety harness, Safety Gloves, Safety goggles, Particle masks, Ear Plugs, Reflective jackets, Fire Extinguisher, Fire prevention kit, First Aid box, Safety tags, Safety Notice board









Module 7: Employability Skills Mapped to DGT/VSQ/N0101

Terminal Outcome:

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

Ouration: 30:00	Duration: 00:00
heory – Key Learning Outcomes	Practical – Key Learning Outcomes
Discuss the importance of Employability Skills in meeting	
the job requirements	
Explain constitutional values, civic rights, duties,	
citizenship, responsibility towards society etc.	
that are required to be followed to become a	
responsible citizen.	
Show how to practice different environmentally	
sustainable practices	
Discuss 21st century skills.	
Display positive attitude, self -motivation,	
problem solving, time management skills and	
continuous learning mindset in different	
situations.	
Use appropriate basic English sentences/phrases while speaking	
Demonstrate how to communicate in a well -mannered	
way with others.	
Demonstrate working with others in a team	
Show how to conduct oneself appropriately with all	
genders and PwD	
Discuss the significance of reporting sexual harassment	
issues in time	
Discuss the significance of using financial products and	
services safely and securely.	
Explain the importance of managing expenses, income,	
and savings.	
Explain the significance of approaching the	
concerned authorities in time for any	
exploitation as per legal rights and laws	
Show how to operate digital devices and use the	









associated applications and features, safely and securely

- Discuss the significance of using internet for browsing, accessing social media platforms, safely and securely
- Discuss the need for identifying opportunities for potential business, sources for arranging money and potential legal and financial challenges
- Differentiate between types of customers
- Explain the significance of identifying customer needs and addressing them
- Discuss the significance of maintaining hygiene and dressing appropriately
- Create a biodata
- Use various sources to search and apply for jobs
- Discuss the significance of dressing up neatly and maintaining hygiene for an interview
- Discuss how to search and register for apprenticeship opportunities

Classroom Aids:

Computer, printer, projector, white board/ flip chart, marker and duster

Tools, Equipment and Other Requirements

Computer (PC) with latest configurations – and Internet connection with standard operating system and standard word processor and worksheet software (Licensed) (all software should either be latest version or one/two version below), UPS, Scanner cum Printer, Computer Tables, Computer Chairs, LCD Projector, White Board 1200mm x 900mm









Trainer Requirements

	Trainer Prerequisites					
Minimum Educational	Specialization			Training Experience		Remarks
Qualification		Year s	Specialization	Ye ar s	Specializatio n	
Post- Graduation/Graduati on in Engineering	M. Tech in Civil/B. Tech in civil	Half Year	Civil Engineering	0	Civil Engineering	As a pre- requisite for new entrant, no
Diploma	Diploma in Civil	One year	Civil Engineering	0	Civil Engineering	prior experience in training
Graduation/ Ex. Army /ITI /12 th pass	General B.A./B.Sc./ Graduation certificate from Army/ITI certificate in relevant trade/12 th pas	Two year s	Working as Scaffolder system/ scaffolding domain /supervisory work of scaffolding domain	0	Working as Scaffolder system/ scaffolding domain /supervisory work of scaffolding domain	/assessment is mandatory. However if someone with prior experience in requisite domain joins, experience will be measured in terms of relevant industry experience

Trainer Certification				
Domain Certification	Platform Certification			
Trainer- 70 % in each NOS of Qualification Pack "CON/Q0316 v 1.0" & 80% overall ,	Trainers - 70% in each NOS of Qualification Pack "MEP/Q2601, v2.0" and 80% overall.			









		Assessor Prerequisites				
Minimum Educational Qualification	Specializat ion	Relevant Industry Experience		Training/Assessme nt Experience		Remarks
		Year s	Specializati on	Yea rs	Specializatio n	
Post- Graduation/Graduati on in Engineering	M. Tech in Civil/B. Tech in civil	One year	Civil Engineering	0	Civil Engineering	As a pre- requisite for new entrant, no prior
Diploma	Diploma in Civil	Two years	Civil Engineering	0	Civil Engineering	experience in training
Graduation/ Ex. Army /ITI /12 th pass	General B.A./B.Sc./ Graduatio n certificate from Army/ITI certificate in relevant trade/12 th pass	Thre e years	Working as Scaffolder system/ scaffolding domain /supervisor y work of scaffolding domain	0	Working as Scaffolder system/ scaffolding domain /supervisory work of scaffolding domain	training /assessment is mandatory. However, if someone with prior experience in requisite domain joins, experience will be measured in terms of relevant industry experience

Assessor Certification			
Domain Certification	Platform Certification		
Assessor- 70% in each NOS of Qualification Pack	Assessor-80% in each NOS of Qualification Pack		
"CON/Q0316 v 1.0" & 80% overall	"MEP/Q2701 v2.0", and overall 80%		









Assessment system Overview

Assessment is done through CSDCI affiliated Assessment Agencies. Assessors are trained & certified by CSDCI after training of assessors program. Assessments is conducted to gauge and assess the trainee's skill and knowledge competency in the specified areas. The assessment will have both theory and practical components in 30:70 ratio for Associate Scaffolder -System job role.

During the practical task, trainees are assessed on their workmanship, quality of finished product and time management. They will be graded for all their assessments based on the approved assessment strategy which is signed off by CSDCI. The Assessor submits an assessment plan to CSDCI prior to assessments.

The assessment plan contains the following information:

- What will be assessed, i.e. the competency based on each NOS based on theory and practical questions
- How assessment will occur i.e. methods of assessment
- When the assessment will occur
- duration of assessment
- Where the assessment will take place i.e. context of the assessment (workplace/simulation)
- The criteria for decision making i.e. those aspects that will guide judgments and
- Where appropriate, any supplementary criteria used to make a judgment on the level of performance.

Testing Environment

Training partner shares the batch start date and end date, number of trainees and the job role.

Assessment will be fixed for a day after the end date of training. It could be next day or later. Assessment will be conducted at the training venue/test center.

The knowledge/theory assessments is conducted with proper seating arrangements with enough space between the candidates to prevent copying.

Question set for theory and practical will be distributed to each candidate by the Assessor. Theory testing will include multiple choice questions, pictorial question, etc. which will test the trainee on his theoretical knowledge of the subject. The skill /practical assessments will be conducted in the approved test centers. The training provider will ensure adequate tools and materials are available to conduct the practical test.

If number of candidates are more than 30, more assessors will be organized on same day to complete the assessment.

The assessment has to comprise of two components, namely:

- 1. Knowledge assessment (theory/viva assessment)
- Skill assessment (practical/hands-on skill assessment)

Mode of assessment

- 1. Demonstration/Practical for Performance /Skill Assessment
- 2. Synoptic multiple choice question test
- 3. Viva For Knowledge Assessment

Performance/skill assessment: The performance/skill assessment will be conducted through









For the practical test trainees are assessed through a given task, which they have to complete correctly for them to be marked as passed.

The assessment is conducted in a simulated working environment. Due to this fact, the assessors must note that the naturally occurring evidence of competence is unavailable or infrequent. Simulation must be undertaken in a Realistic Working Environment which provides an environment that replicates the key characteristics of the workplace in which the skill to be assessed is normally employed.

Knowledge Assessment: The knowledge assessments are conducted through written test/viva.

Synoptic test is used for this. It is an MCQ (Multiple Choice Question) test which are prepared externally and externally marked, meaning by agency having no link with training partners. The test may be conducted by the assessor in the oral mode, if required, considering the lack of reading and comprehending acumen (skills) of trainees. In such cases, the assessor will mention it on top of the MCQ submitted to CSDCI.

The assessment strategy, weightage and duration of assessment for Associate Scaffolder -System is summarized below

Assessment Type	Formative or Summative	Strategies	Weightage	Duration (hours)
Knowledge	Summative	MCQ/Viva	30	1.0
skill	Summative	Structured practical task	70	5.0

Assessment Quality Assurance framework

CSDCI has developed assessment criteria framework for each Qualification pack as per National Occupational Standards. The criteria framework includes weightages/marks for each criteria under knowledge and skill. The criteria ensures quality assurance as it ensures valid, consistent and fair assessments at all locations. Issued to the affiliated Assessment body. The Assessment body develop questions based on CSDCI issued assessment criteria.

Evidences in the form of answer sheets in case of knowledge assessments are collected. For skill assessments videos and photographs are prepared as evidence. These are submitted by the assessor to the assessment agency. CSDCI does random checks of the same with the participant/ trainee's ID and ascertains authenticity and validity of assessments.

The training partner will intimate the time of arrival of the assessor and time of leaving the venue. Random spot checks/audit is conducted by CSDCI to monitor assessment.









Methods of Validation

Unless the trainee is registered, the person cannot undergo assessment. To further ensure that the person registered is the person appearing for assessment, ID verification is carried out. Aadhar card number is part of registering the candidate for training. This forms the basis of further verification during the assessment.

Assessor conducts the assessment through theory and practical questions developed in accordance with the assessment criteria and guidelines issued by CSDCI. This too is verified by random audits carried out by CSDCI.

Evidences for assessments are to be collected and submitted to CSDCI for verification as per demand.

Assessment agency is responsible to put details in SIP. CSDCI will also validate the data and result received from the assessment agency.

Method of assessment documentation and access

The assessment agency will upload the result of assessment in the portal. The data will not be accessible for change by the assessment agency after the upload. The assessment data will be validated by CSDCI assessment team. After upload, only CSDCI can access this data.

CSDCI approves the results within five days after which results are uploaded on SIP by Assessment Agency.

References

Glossary

Term	Description
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Declarative Knowledge	Declarative knowledge refers to facts, concepts and principles that need to be known and/or understood in order to accomplish a task or to solve a problem.
Key Learning Outcome	Key learning outcome is the statement of what a learner needs to know, understand and be able to do in order to achieve the terminal outcomes. A set of key learning outcomes will make up the training outcomes. Training outcome is specified in terms of knowledge, understanding (theory) and skills (practical application).
OJT (M)	On-the-job training (Mandatory); trainees are mandated to complete specified hours of training on site
OJT (R)	On-the-job training (Recommended); trainees are recommended the specified hours of training on site
Procedural Knowledge	Procedural knowledge addresses how to do something, or how to perform a task. It is the ability to work, or produce a tangible work output by applying cognitive, affective or psychomotor skills.
Training Outcome	Training outcome is a statement of what a learner will know, understand and be able to do upon the completion of the training .
Terminal Outcome	Terminal outcome is a statement of what a learner will know, understand and be able to do upon the completion of a module. A set of terminal outcomes help to achieve the training outcome.









Term	Description
QP	Qualification Pack
NSQF	National Skills Qualification Framework
NSQC	National Skills Qualification Committee
NOS	National Occupational Standards
CSDCI	Construction Skill development Council of India
MCQ	Multiple Choice Question