

## **NSQF QUALIFICATION FILE**

(Approved in 21th NSQC dated 03 August 2018)

### **CONTACT DETAILS OF THE BODY SUBMITTING THE QUALIFICATION FILE**

#### **Name and address of submitting body:**

Directorate General of Training (DGT),  
Ministry of Skill Development & Entrepreneurship (MoSDE)  
Pusa, New Delhi

#### **Name and contact details of individual dealing with the submission**

**Name:** Shri. S.D Lahiri

**Position in the organization:** Deputy Director General (T&E,SDI)

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#### **List of documents submitted in support of the Qualifications File**

1. Qualification document- Assistant work Supervisor
2. Curriculum for Assistant work Supervisor under Construction Sector for Modular Employable Scheme (MES)
3. Executive Summary of Human Resource and Skill Requirements in Construction Sector by NSDC

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### SUMMARY

1	<b>Qualification Title</b>	Assistant Work Supervisor
2	<b>Qualification Code, if any</b>	CON 707
3	<b>NCO code and occupation</b>	3123.0100: Work Supervisor, Construction
4	<b>Nature and purpose of the qualification (Please specify whether qualification is short term or long term)</b>	<p>Nature of qualification is Certification and job role of Assistant work Supervisor.</p> <p>The purpose of qualification to make individual to do activity planning, managing resources and supervising the crew of workmen to achieve planned milestones while performing qualitative checks to the completed works in flexible/ rigid pavement. The individual should possess sound technical knowledge, should be able to monitor and maintain safe and quality working practices.</p>
5	<b>Body/bodies which will award the qualification</b>	National Council for Vocational Training (NCVT)
6	<b>Body which will accredit providers to offer courses leading to the qualification</b>	GOI Ministries and State departments who have adopted MES qualifications, accredit training providers for their programs and schemes (only in case of SDIS schemes Training providers accredited by States on behalf of NCVT)
7	<b>Whether accreditation/affiliation norms are already in place or not , if applicable (if yes, attach a copy)</b>	-NA-
8	<b>Occupation(s) to which the qualification gives access</b>	Assistant work Supervisor
9	<b>Job description of the occupation</b>	Assistant work Supervisor read drawing of different sheets of construction planning. Manage resource and supervising team members and plan activity, measure with different devices, draw and prepare drawing sheets of foundation etc.
10	<b>Licensing requirements</b>	-NA-
11	<b>Statutory and Regulatory requirement of the relevant sector (documentary evidence to be provided)</b>	-NA-
12	<b>Level of the qualification in the NSQF</b>	Level 3
13	<b>Anticipated volume of training/learning required to complete the qualification</b>	500 hours

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14	<b>Indicative list of training tools required to deliver this qualification</b>	Mentioned in curriculum	
15	<b>Entry requirements and/or recommendations and minimum age</b>	Minimum 8th Standard and above, 18 yrs and above age, MES Course of Assistant Shuttering Carpenter & Scaffolder.	
16	<b>Progression from the qualification (Please show Professional and academic progression)</b>	Works Supervisor, Contractor	
17	<b>Arrangements for the Recognition of Prior learning (RPL)</b>	RPL arrangements are not planned under this qualification.	
18	<b>International comparability where known (research evidence to be provided)</b>	-NA-	
19	<b>Date of planned review of the qualification.</b>	5 years after approval of the Qualification	
20	<b>Formal structure of the qualification</b>		
	<b>Mandatory components</b>		
	<b>Title of component and identification code/NOSs/Learning outcomes</b>	<b>Estimated size (learning hours)</b>	<b>Level</b>
(i)	DGT/MES/CON/N51: To Understand Basic concept Measurement.	50	3
(ii)	DGT/MES/CON/N52: To Understand the Surveying work(leveling)	100	3
(iii)	DGT/MES/CON/N53: Reading and marking drawing.	100	3
(iv)	DGT/MES/CON/N54: Supervising Excavation and foundation.	100	3
(v)	DGT/MES/CON/N55: To Understand concept of Concrete work.	100	3
(vi)	DGT/MES/CON/N55: To Understand Safety and precautions while working on Construction sites.	50	3
	<b>Sub Total (A)</b>	<b>500</b>	

<b>Total (A+B)</b>		
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**SECTION 1  
ASSESSMENT**

21	<b>Body/Bodies which will carry out assessment:</b> DGT empaneled Assessing Bodies (ABs)
22	<b>How will RPL assessment be managed and who will carry it out?</b> RPL arrangements are not planned under this qualification.
23	<b>Describe the overall assessment strategy and specific arrangements which have been put in place to ensure that assessment is always valid, reliable and fair and show that these are in line with the requirements of the NSQF.</b>  <b>Criteria for selection of Assessment body</b> Minimum Eligibility Criteria <ul style="list-style-type: none"><li>• The applicant shall be a legal entity, registered in India.</li><li>• The applicant should have in last two years carried out competency / skill assessment for minimum 1000 persons or should have trained minimum 1000 persons and got tested by some agencies such as NCVT, Sector Skill Council, State, board/ council and reputed industry Association. Organizations having experience in testing of competencies would be preferred.</li><li>• In case more number of applications is received, preference will be given to those organizations that have trained/assessed larger number of persons.</li><li>• The applicant is not a Training Provider (TP) in the same sector and in same State, but it can be TP in other States, other Sectors or other scheme.</li><li>• The applicant shall have access to technically qualified personnel of repute and integrity in different industrial trades and technology.</li><li>• The applicant shall develop dedicated human resource for handling the processes in assessment process.</li><li>• The applicant shall declare its linkages with other organization(s), if any to ensure independence and avoid any conflict of interest.</li><li>• Institutions/ Firms blacklisted by any Government Department shall not be considered in this RFP.</li><li>• The Applicant shall provide the information and supporting documents towards their claims.</li><li>• Initially provisional empanelment will be awarded to the organizations based on the evaluation of eligibility of the Assessing Body based on the criteria.</li><li>• Based on the module and sector that will be handled by the assessor,</li></ul>

the assessing body shall send its assessor for competency evaluation in the institutions which will be notified by DGT time to time. The assessor will be assessed to ascertain the competency to carry out competency based assessment.

- Final empanelment would be granted subject to the Assessing Body fulfilling the following conditions of getting the competencies of 2 assessors of each module per State evaluated in the institutes notified by the DGT. Testing charges for evaluating the competencies of the assessors will be borne by the Assessing Bodies.

**(1) Assessment process:**

The assessment process aims to test and certify the competency of the persons through Assessing Bodies who seek certification of their skills acquired informally or the persons who have been trained at the registered TPs. The competency assessment of the candidate is being done by the Assessor Competency Evaluation (ACE) qualified assessor of the independent Assessing Bodies (AB) which is not involved in training delivery, to ensure an impartial assessment. ACE is conducted to evaluate the competency of the assessor. In the assessment process, identification of competency, ways to measure the competency and deciding on the type of evidence that has to be collected are the responsibility of the Assessing bodies whereas administering the assessment and collecting the evidence and reporting the results are the responsibility of the assessors. The assessment process consists of following components:

**Theory Test:**

- It must assess the knowledge which is essential for a person to do the job. Without this knowledge, the person will not be able to do the job.
- The questions shall be of objective type involving selection of correct response.
- The question paper should contain sketches/ diagrams/ photographs/ drawing to overcome the problems of reading comprehension.
- The test shall be of short duration.

**Practical Test:**

It shall be able to test:

- Manipulative skills to handle tools and equipment.
- Speed in doing work.
- Accuracy maintained
- Quality in workmanship.
- Sequence of performance.
- Economical use of material.
- Neatness & housekeeping.
- All the competencies prescribed in the course curriculum.

The Assessment Parameters adopted during assessment:

- Knowledge of equipment, limitation of use of tools and equipment, and methods & procedure.
- Understanding of functioning of equipment & tool, criteria to be used in selecting tools for given job, and the process of measurement.

- Skill in finishing to required measurement, handling measurement & calculations, handling tools and equipment with ease, finishing neatly.
- Abilities to take corrective steps, use correct work habits, take measurements, complete the job within stipulated time, and adopt safe practices.
- Attitude towards the work, accurate & precise work and co-workers and supervisor.

(2) Duration of Test:

The duration of test vary according to the task. Theory test shall be of 1 hour duration and practical test for engineering trade shall be 6 to 8 hours minimum and non-engineering it shall be of 4 hours minimum. Assessing Bodies while preparing practical test shall ensure that candidate shall be tested on all the competencies prescribed in the course module.

The marking pattern and distribution of marks for the qualification are as under:

Terminal competency	Maximum marks
Application of knowledge	30
Care for tools & equipment	15
Economic use of materials	15
Safety consciousness	10
Speed	10
Accuracy	15
Quality of workmanship	20
Amount of work	15
No. of attempts	10
Attitude	10
Total maximum marks for Practical	150
Maximum marks for theory	50

(3) **Minimum pass mark:**

Minimum passing marks for Practical is 60%

Minimum pass marks for theory is 40%

**Pre-assessment activities for Assessor at the Testing Centre**

- Verification of student credentials: The assessor check the application form submitted by the candidates and verify the photo pasted on the forms with candidates who are taking assessment in accordance with checklist
- Verification of testing centre for adequate infrastructure, tools and equipment: The assessor verifies the availability of infrastructure, tools and equipment for carrying out both theory and practical assessments.

The minimum requirement prescribed under the MES modules is used as benchmark.

- Attendance verification: The assessor checks the attendance register of candidates and instructors until the time biometric attendance system is put in place. Once the biometric attendance system is in place, the biometric attendance of assessors along with that of trainees/candidates has to be captured during the assessment at the start as well as end of theory and practical test.
- Attendance during assessment: The assessor takes the attendance of all the students who appear for assessment after the successful verification of the student credentials and before the start of the assessment. The assessor also provides his/her attendance during start and end of the practical and theory test.
- Verification of the documents related test carried out by Training Provider/ Testing Centre (TC) for candidates who were not able to produce document in support of having passed the qualification.

#### **Post-assessment activities**

- The assessor consolidates all the theory and practical test papers and ensures that all the mandatory information is filled. The total score for each student should be calculated and recorded in result sheet.
- The assessor send the attendance sheet, result sheet, answer papers by courier/post to the assessing body immediately after the completion of assessment
- Uploading outcome of the assessment and photos in portal by assessing body
- Assessing body upload the results within one week of the assessment date.
- Photos taken by the assessors during assessment are sent to respective RDATs through e-mail only. Non dispatch of photos of assessment to RDAT makes assessment void. Re-assessment of such batch is done by the Assessing Bodies on their own expenses.
- Details of assessors are emailed to RDAT at the time of uploading the outcome of the assessment. Outcome of the assessment is not accepted in case details of assessors are not emailed to respective RDAT.
- Maintaining assessment records
- Publishing of results and Certificate issue
- RDAT verifies the outcome of the assessment, details of assessors, photos and print and sign the certificates for successful candidates and send it to the respective candidates. In case of direct candidate's assessment, the Certificates are sent to the Assessing Body.
- Certificates which will be issued carry photograph of the trainee, name of Training Provider, start date & end date of training and duration of training once the systems for the same are put in place.
- The certificate is issues under the aegis of NCVT. All the communications are done through portal.

Please attach most relevant and recent documents giving further information about assessment and/or RPL.

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Give the titles and other relevant details of the document(s) here. Include page references showing where to find the relevant information.

### ASSESSMENT EVIDENCE

Complete a grid for each component as listed in “Formal structure of the the qualification” in the Summary.

*NOTE: this grid can be replaced by any part of the qualification documentation which shows the same information – i.e. Learning Outcomes to be assessed, assessment criteria and the means of assessment.*

#### 24. Assessment evidences

**Title of Component:** Assistant Works Supervisor

Outcomes to be assessed/ NOSs to be assessed	Assessment criteria for the outcome	Means of assessment
DGT/MES/CON/N 08: Understanding Basic concept Measurement.	AO1. Explain to read various measuring tools for calculation of areas and volumes of various shapes of structures.	Theory Test
	AO2. Explain different types of tools and equipment used in construction work.	Theory Test
	AO3. Demonstrate linear measurement.	Practical Test
	AO4. Demonstrate to measure volumes and area of different shapes.	Practical Test
	AO5. Explain procedure to identify different materials.	Theory Test
	AO6. Explain to measure length, width and depth in different units.	Theory Test
	AO7. Demonstrate to identify different tools and equipment used in construction sector	Practical Test
	AO8. Demonstrate Knowledge of different formulae for area and volume different shapes.	Practical Test
DGT/MES/CON/N 09: Understanding the Surveying (leveling)	AO1. Explain to Transferring measurement to field book.	Theory Test
	AO2. Explain to identify different types of leveling Instruments.	Theory Test
	AO3. Demonstrate chain survey.	Practical Test
	AO4. Demonstrate to Fixing and leveling different types of Instruments	Practical Test
	AO5 Explain different methods of leveling and Calculating the levels by using different methods	Theory Test
	AO6. Demonstrate Reading of levels and instruments angles and Transferring the levels from one place to other	Practical Test
DGT/MES/CON/N	AO1. Explain about reading Plan, cross section,	Theory Test



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10: Understanding Reading and marking drawing.	elevation, excavation, foundation etc.	
	AO2. Demonstrate to Draw/ prepare basic drawings – plan section, elevation , excavation , sections etc.	Practical Test
	AO3. Explain Marking with Pythagoras theorem method and checking layout.	Theory Test
	AO4. Explain Marking the columns with the help of Brick.	Theory Test
	AO5. Demonstrate Pythagoras theorem. Demonstrate tools and materials used for layout	Practical Test
	AO6. Demonstrate grid marking with the help of drawings for layout	Practical Test
DGT/MES/CON/N 11: Understanding Excavation and foundation.	AO1. Explain Identification of different types of soils.	Theory Test
	AO2. Explain Safety precautions while excavation of the soil	Theory Test
	AO3. Demonstrate different types of soils.	Practical Test
	AO4. Demonstrate Methods of different types of tools used in Excavation	Practical Test
	AO5. Explain reading the drawings for foundation. Checking the levels while excavation of the soil.	Theory Test
	AO6. Demonstrate about different types of foundations	Practical Test
DGT/MES/CON/N 12: Understanding Concrete work.	AO1. Explain Materials used in RCC and PCC & slump test	Theory test
	AO2. Explain to identify bars & their unit weights.	Theory test
	AO3. Demonstrate following : 1) Plain Cement Concrete(PCC) 2) Reinforced cement Concrete (RCC)	Practical Test
	AO4. Demonstrate various concrete grades	Practical Test
	AO5. Explain Minimum coverings and calculation the volume of work and material required.	Theory Test
	AO6. Demonstrate Crushing Strength of the concrete	Practical Test
DGT/MES/CON/N 13: Understanding Safety and precautions while working on Construction sites.	AO1. Explain to identify and use of safety gadgets and first aid	Theory Test
	AO2. Demonstrate safety precautions in connection with personal, mechanical, electrical and knowledge of first aids	Practical Test
<b>Means of assessment 1</b> The assessment comprise of <ul style="list-style-type: none"> <li>• Theory Examination MCQ, VIVA Voce</li> <li>• Practical assessment Role plays, Demonstration</li> </ul>		
<b>Pass/Fail</b> The trainee is judged as pass in the qualification if minimum passing marks is obtained in each test i.e Theory and Practical. Minimum pass mark: Minimum passing marks for Practical is 60%		

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Minimum pass marks for theory is 40%

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### SECTION 2

#### 25. EVIDENCE OF LEVEL

##### OPTION A

Title/Name of qualification/component: Assistant Works Supervisor			Level: 3
NSQF Domain	Outcomes of the Qualification/Component	How the outcomes relates to the NSQF level descriptors	NSQF Level
Process	The job holder monitors performance of subordinate; suggest remedial/ corrective measures and coordinates among concerned authorities to achieve assigned work milestones as per applicable safety and quality norms.	The job role is expected to exhibit wide range of technical skills, problem solving skills and resource managing skills related to execute construction of pavements. Individual at this level heads an allocated part of construction by carrying out resource planning, supervising critical activities, ensuring specified safety and quality checks have been carried out to completed/ongoing activities.	3
Professional knowledge	The job holder should have thorough and broad knowledge of guidelines/ specifications of material and work methods to be adopted, sequence and timelines of each activity/ work progress status, management of resources and planning of activities in coordination with superior personnel. Individual should also know applicable quality parameters to be followed in each step of pavement construction and detailed function of paving equipment/ machineries used for construction of pavements.	The knowledge is acquired by practicing domain specific operations in a vast range of application over a long period of time and by studying applicable documents as required for construction of pavements.	3
Professional skill	The job holder is expected to take part in planning and sequencing construction process of pavements by providing required inputs to concerned engineer, brief subordinate team about applicable quality and safety norms,	A range of practical and problem solving skills are required to be demonstrated during various stages of construction process by the job holder.	3

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	manage resources, equipment and manpower for assigned tasks, coordinate with concerned authorities for execution of assigned works, suggest and conduct corrective measures/ repairing methods to faulty/ damaged works.		
Core skill	The job holder is expected to provide instructions to subordinates verbally and in written to meet the work requirement. Individual in this job role collects required data, prepare status/ note sheets, fill up check lists/ quality formats, seeks inputs from superior and subordinates, manage resources by coordinating with concerned authorities, as per agreed plan. The job holder carries out arithmetical and geometrical calculations relevant to conversion of units, material requirement as and when necessary.	Since the required skill level refers to be entry levelled as it may be obtained by very basic educational qualification, the job role can be place at level 03	3
Responsibility	The job holder is responsible for own work (ref. professional skills column) and fully responsible for subordinates works. Individual at this job role is expected to check for defects, faults in completed works, suggest or take remedial/ corrective actions as per agreed quality norms, oversee lifting and erection works by providing instructions to subordinates and gather inputs from them in order to monitor progress, unresolved issues and ensure timely action by self or concerned authorities. The job holder is also responsible for implementation of prescribed work methodology, applicable quality and safety norms at workplace under supervision.	The individual in this job role contribute to any operation mainly by physical output. The completed work needs to be checked and verified thoroughly by superior having higher level of competency. As the outcome of the activities are measured only quantitatively and expected to be less accurate. So it is justified to place the job role in level 03	3

**SECTION 3**  
**EVIDENCE OF NEED**

<p>26</p>	<p><b>What evidence is there that the qualification is needed? What is the estimated uptake of this qualification and what is the basis of this estimate?</b></p> <p><b>Need of the Qualification:</b> The Indian construction industry comprising infrastructure and real estate sectors employs over 26 million casual workers and is the country’s second largest employer after agriculture. The Planning Commission of India has projected that the construction sector will require another 47 million people in the workforce over the next decade (FICCI 2010:13). Despite such significance to the Indian economy, there is no specific policy for skill building in the construction sector. The current pool of the construction workforce in India comprises mainly unskilled workers</p> <p>Among the 10 per cent skilled construction workers, emigration to overseas countries - Gulf countries in most cases - for higher wages is common. Emigration worsens the shortage of skilled workers and creates an upward pressure on domestic wages leading to a situation where Indian firms have to import workers to meet their requirements. (SKOPE Research Paper No. 111 November 2012: Shortage of Skilled Workers: A Paradox of the Indian Economy by Ruchi Hajela COMPAS, University of Oxford).</p> <p><b>Industry Relevance:</b> List of Trade Committee members is attached in curriculum</p> <p><b>Usage of the Qualification:</b> About 27 individuals have been assessed in this course under this scheme in FY 2016-17, which shows there is requirement of this skill in the Market.</p> <p>About 148 candidates have been trained across country under this Course under ELST&amp;P scheme of Rajasthan State till Feb 2017.</p> <p>Also the same course is widely used in Tamil Nadu Skill Development Mission.</p> <p><b>Estimated uptake:</b> The infrastructure sector will require 103 million workers by 2022, according to the NSDC. The informal sector—which presently employs more than 90% of India’s workforce—with 38 million would be the second-largest generator of jobs, followed by textiles and clothing at 26 million.</p> <p>The government of India had conducted a skills mapping study and identified carpentry, electrician, painter, welder, masonry, crane operations and plumbing as key roles which will be in demand until 2022 and the level of skills required. Together, these key roles will require 7.3 million vocationally trained workers by 2022.</p> <p>(SKOPE Research Paper No. 111 November 2012: Shortage of Skilled</p>
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	<p>Workers: A Paradox of the Indian Economy by Ruchi Hajela COMPAS, University of Oxford).</p>
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27	<p><b>Recommendation from the concerned Line Ministry of the Government/Regulatory Body. To be supported by documentary evidences</b> -NA-</p>
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28	<p><b>What steps were taken to ensure that the qualification(s) does (do) not duplicate already existing or planned qualifications in the NSQF? Give justification for presenting a duplicate qualification</b></p> <p>The Qualification has been mapped with the National Qualification Register, maintained by NSDA to ensure the qualification does not duplicate.</p>
29	<p><b>What arrangements are in place to monitor and review the qualification(s)? What data will be used and at what point will the qualification(s) be revised or updated? Specify the review process here</b></p> <p>1) DGT interacts with training providers to gather feedback in implementation and updation of qualification. 2) Monitoring of results of assessments 3) Employer feedback will be sought post-placement 4) In a recent initiative, a Mentor Council (MC) for the relevant sector has been formed to review the curriculum of this qualification under the sector. 5) CSTARI, the research wing of DGT, reviews and updates the qualification, in consultation with industries and other stakeholders, on a regular basis.</p> <p>The qualification is reviewed after every 5 years for updation according to latest Technologies and practices.</p>

Please attach most relevant and recent documents giving further information about any of the topics above.

Give the titles and other relevant details of the document(s) here. Include page references showing where to find the relevant information.

## **SECTION 4**

### **EVIDENCE OF PROGRESSION**

30	<p><b>What steps have been taken in the design of this or other qualifications to ensure that there is a clear path to other qualifications in this sector?</b></p> <p><b><i>Show the career map here to reflect the clear progression</i></b></p> <p>An Individual has vertical pathway to promote to higher designations in an organization. Can further undergo specialization course to excel to the higher post in jobs listed above or can start with up his/her own business.</p> <p>Progression chart: Progression chart: Assistant Work Supervisor &gt; Work Supervisor &gt; Contractor</p>
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