

QUALIFICATION FILE

Building Management System Project Manager

- ☒ Short Term Training (STT) ☐ Long Term Training (LTT) ☐ Apprenticeship
- ☐ Upskilling ☐ Dual/Flexi Qualification ☐ For ToT ☐ For ToA
- ☒ General ☐ Multi-skill (MS) ☐ Cross Sectoral (CS) ☐ Future Skills ☐ OEM

NCrF/NSQF Level: 6

Submitted By:

Electronics Sector Skills Council of India (ESSCI)

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Specify the training duration and assessment criteria at NOS/ Module level. For further details, refer to the curriculum document.	5
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Section 1: Basic Details

1.	Qualification Name	Building Management System Project Manager														
2.	Sector/s	Electronics														
3.	Type of Qualification: ☐ New ☒ Revised ☐ Has Electives/Options ☐ OEM	NQR Code & version of existing/previous qualification: (change to previous, once approved)- 2022/EHW/ESSC/05389 & V2.0		Qualification Name of existing/previous version: Building Management System Project Manager												
4.	a. OEM Name b. Qualification Name (Wherever applicable)	NA														
5.	National Qualification Register (NQR) Code & Version (Will be issued after NSQC approval)	QG-06-EH-03973-2025-V3-ESSCI	6. NCrF/NSQF Level: 6													
7.	Award (Certificate/Diploma/Advance Diploma/ Any Other) (Wherever applicable specify multiple entry/exits also & provide details in annexure)	Certificate														
8.	Brief Description of the Qualification	A Building Management System Project Manager is responsible for the successful delivery of Building Management System (BMS) installation projects. The responsibilities include coordinating with the client to understand their requirements and then working with various teams within the organization for the successful installation, testing, commission and handover of BMS to the client.														
9.	Eligibility Criteria for Entry for Student/Trainee/Learner/Employee	a. Entry Qualification & Relevant Experience: <table border="1"> <thead> <tr> <th>S. No.</th> <th>Academic/Skill Qualification (with Specialization - if applicable)</th> <th>Required Experience (with Specialization - if applicable)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>UG Degree 3 or 4 year in the relevant field (Physics/Electronics /Electrical/Mechanical)</td> <td>3 years of relevant experience.</td> </tr> <tr> <td>2</td> <td>3 Year Diploma after 10th in (Electronics/Electrical/Mechanical) after 10th</td> <td>4.5 years of relevant experience.</td> </tr> <tr> <td>3</td> <td>Previous relevant qualification of NSQF level 5.5</td> <td>1.5 years of relevant experience</td> </tr> </tbody> </table> # Relevant Experience in Industrial Automation. b. Age: NA			S. No.	Academic/Skill Qualification (with Specialization - if applicable)	Required Experience (with Specialization - if applicable)	1	UG Degree 3 or 4 year in the relevant field (Physics/Electronics /Electrical/Mechanical)	3 years of relevant experience.	2	3 Year Diploma after 10th in (Electronics/Electrical/Mechanical) after 10th	4.5 years of relevant experience.	3	Previous relevant qualification of NSQF level 5.5	1.5 years of relevant experience
S. No.	Academic/Skill Qualification (with Specialization - if applicable)	Required Experience (with Specialization - if applicable)														
1	UG Degree 3 or 4 year in the relevant field (Physics/Electronics /Electrical/Mechanical)	3 years of relevant experience.														
2	3 Year Diploma after 10th in (Electronics/Electrical/Mechanical) after 10th	4.5 years of relevant experience.														
3	Previous relevant qualification of NSQF level 5.5	1.5 years of relevant experience														
10.	Credits Assigned to this Qualification, Subject to Assessment (as per National Credit Framework (NCrF))	22	11. Common Cost Norm Category (I/II/III) (wherever applicable): I													

<Ratified in 43rd NSQC Meeting & Dated: 08/05/2025>

12.	Any Licensing requirements for Undertaking Training on This Qualification (wherever applicable)	NA																						
13.	Training Duration by Modes of Training Delivery (Specify Total Duration as per selected training delivery modes and as per requirement of the qualification)	☐ Offline ☐ Online ☒ Blended <table border="1"> <thead> <tr> <th>Training Delivery Modes</th> <th>Theory (Hours)</th> <th>Practical (Hours)</th> <th>OJT Mandatory (Hours)</th> <th>OJT Recommended (Hours)</th> <th>Total (Hours)</th> </tr> </thead> <tbody> <tr> <td>Classroom (offline)</td> <td>00:00</td> <td>240:00</td> <td>210:00</td> <td>00:00</td> <td rowspan="2">660:00</td> </tr> <tr> <td>Online</td> <td>210:00</td> <td>00:00</td> <td>00:00</td> <td>00:00</td> </tr> </tbody> </table> (Refer Blended Learning Annexure for details)						Training Delivery Modes	Theory (Hours)	Practical (Hours)	OJT Mandatory (Hours)	OJT Recommended (Hours)	Total (Hours)	Classroom (offline)	00:00	240:00	210:00	00:00	660:00	Online	210:00	00:00	00:00	00:00
Training Delivery Modes	Theory (Hours)	Practical (Hours)	OJT Mandatory (Hours)	OJT Recommended (Hours)	Total (Hours)																			
Classroom (offline)	00:00	240:00	210:00	00:00	660:00																			
Online	210:00	00:00	00:00	00:00																				
14.	Aligned to NCO/ISCO Code/s (if no code is available mention the same)	NCO-2015/7411.0100																						
15.	Progression path after attaining the qualification (Please show Professional and Academic progression)	Mechanical Engineering and Plumbing General Manager																						
16.	Other Indian languages in which the Qualification & Model Curriculum are being submitted	Hindi																						
17.	Is similar Qualification(s) available on NQR- if yes, justification for this qualification	☐ Yes ☒ No URLs of similar Qualifications:																						
18.	Is the Job Role Amenable to Persons with Disability	☐ Yes ☒ No If "Yes", specify applicable type of Disability:																						
19.	How Participation of Women will be Encouraged	No gender sensitization																						
20.	Are Greening/ Environment Sustainability Aspects Covered (Specify the NOS/Module which covers it)	☒ Yes ☐ No Employability Skills (DGT/VSQ/N0102)																						
21.	Is Qualification Suitable to be Offered in Schools/Colleges	Schools ☐ Yes ☒ No Colleges ☒ Yes ☐ No																						
22.	Name and Contact Details of Submitting / Awarding Body SPOC (In case of CS or MS, provide details of both Lead AB & Supporting ABs)	Name: Saleem Ahmed Email: ceo@essc-india.org Contact No.: 011 – 8447738501 Website: https://www.essc-india.org/																						
23.	Final Approval Date by NSQC: 07.05.2025	24. Validity Duration: 3 Years				25. Next Review Date: 30.04.2028																		

Section 2: Module Summary

NOS/s of Qualifications

(In exceptional cases these could be described as components)

Mandatory NOS/s:

Specify the training duration and assessment criteria at NOS/ Module level. For further details, refer to the curriculum document.

Th.-Theory **Pr.-Practical** **OJT-On the Job** **Man.-Mandatory Training** **Rec.-Recommended Proj.-Project**

S. No	NOS/Module Name	NOS/Module Code & Version (if applicable)	Core/ Non-Core	NCrF/NSQF Level	Credits as per NCrF	Training Duration (Hours)					Assessment Marks					
						Th.	Pr.	OJT-Man.	OJT-Rec.	Total	Th.	Pr.	Proj.	Viva	Total	Weightage (%) (if applicable)
1.	Manage the BMS tendering, designing and procurement processes	ELE/N6103 & V.2.0	Core	6	11	96	114	120	0	330	30	40	0	30	100	40
2.	Manage the BMS installation, testing, commissioning and handover process	ELE/N6104 & V.2.0	Core	6	9	90	90	90	0	270	30	40	0	30	100	40
3.	Employability Skills (60 hours)	DGT/VSQ/N0102 & V1.0	Non-core	4	2	24	36	0	0	60	20	30	0	0	50	20
Duration (in Hours) / Total Marks					22	210	240	210	0	660	80	110		60	250	100

Elective NOS/s:

S. No	NOS/Module Name	NOS/Module Code & Version (if applicable)	Core/ Non-Core	NCrF/ NSQF Level	Credits as per NCrF	Training Duration (Hours)					Assessment Marks					
						Th.	Pr.	OJT-Man.	OJT-Rec.	Total	Th.	Pr.	Proj.	Viva	Total	Weightage (%) (if applicable)
1.																
2.																
Duration (in Hours) / Total Marks																

Optional NOS/s:

S. No	NOS/Module Name	NOS/Module Code & Version (if applicable)	Core/ Non-Core	NCrF/ NSQF Level	Credits as per NCrF	Training Duration (Hours)					Assessment Marks					
						Th.	Pr .	OJT- Man.	OJT- Rec.	Total	Th.	Pr .	Proj .	Viv a	Tot al	Weightage (%) (if applicable)
1.																
2.																
Duration (in Hours) / Total Marks																

Assessment - Minimum Qualifying Percentage

Please specify **any one** of the following:

Minimum Pass Percentage – Aggregate at qualification level: 70 % (Every Trainee should score specified minimum aggregate passing percentage at qualification level to successfully clear the assessment.)

Minimum Pass Percentage – NOS/Module-wise: % (Every Trainee should score specified minimum passing percentage in each mandatory and selected elective NOS/Module to successfully clear the assessment.)

Section 3: Training Related

1.	Trainer's Qualification and experience in the relevant sector (in years) (as per NCVET guidelines)	B.E./B.Tech (Electrical/ Mechanical/ Electronics) with 5 years industrial and 2 years training experience in the field of BMS Project Management. Or Certified in relevant CITS Trade
2.	Master Trainer's Qualification and experience in the relevant sector (in years) (as per NCVET guidelines)	B.E./B.Tech (Electrical/ Mechanical/ Electronics) with 7 years industrial and 2 years training experience in the field of BMS Project Management. Or Certified in relevant CITS Trade
3.	Tools and Equipment Required for Training	☒ Yes ☐ No (If "Yes", details to be provided in Annexure)
4.	In Case of Revised Qualification, Details of Any Upskilling Required for Trainer	NA

Section 4: Assessment Related

1.	Assessor's Qualification and experience in relevant sector (in years) (as per NCVET guidelines)	B.E./B.Tech (Electrical/ Mechanical/ Electronics) with 7 years industrial and 2 years training experience in the field of BMS Project Management. Or Certified in relevant CITS Trade
2.	Proctor's Qualification and experience in relevant sector (in years) (as per NCVET guidelines)	B.E./B.Tech (Electrical/ Mechanical/ Electronics) with 8 years industrial and 2 years training experience in the field of BMS Project Management. Or Certified in relevant CITS Trade
3.	Lead Assessor's/Proctor's Qualification and experience in relevant sector (in years) (as per NCVET guidelines)	B.E./B.Tech (Electrical/ Mechanical/ Electronics) with 8 years industrial and 2 years training experience in the field of BMS Project Management. Or Certified in relevant CITS Trade
4.	Assessment Mode (Specify the assessment mode)	Blended
5.	Tools and Equipment Required for Assessment	☒ Same as for training ☐ Yes ☐ No (details to be provided in Annexure-if it is different for Assessment)

Section 5: Evidence of the need for the Qualification

Provide Annexure/Supporting documents name.

1.	Latest Skill Gap Study (not older than 2 years) (Yes/No): Yes
2.	Latest Market Research Reports or any other source (not older than 2 years) (Yes/No): Yes
3.	Government /Industry initiatives/ requirement (Yes/No): Yes
4.	Number of Industry validation provided: 21
5.	Estimated nos. of persons to be trained and employed: 800
6.	Evidence of Concurrence/Consultation with Line Ministry/State Departments: Yes If "No", why:

Section 6: Annexure & Supporting Documents Check List

Specify Annexure Name / Supporting document file name

1.	Annexure: NCrf/NSQF level justification based on NCrf level/NSQF descriptors (Mandatory)	Attached
2.	Annexure: List of tools and equipment relevant for qualification (Mandatory, except in case of online course)	Attached
3.	Annexure: Detailed Assessment Criteria (Mandatory)	Attached
4.	Annexure: Assessment Strategy (Mandatory)	Attached
5.	Annexure: Blended Learning (Mandatory, in case selected Mode of delivery is "Blended Learning")	Filled
6.	Annexure: Multiple Entry-Exit Details (Mandatory, in case qualification has multiple Entry-Exit)	Filled
7.	Annexure: Acronym and Glossary (Optional)	Attached
8.	Supporting Document: Model Curriculum (Mandatory – Public view)	Attached
9.	Supporting Document: Career Progression (Mandatory - Public view)	Attached
10.	Supporting Document: Occupational Map (Mandatory)	Attached
11.	Supporting Document: Assessment SOP (Mandatory)	
12.	Any other document you wish to submit:	

Annexure: Evidence of Level

NCrf/NSQF Level Descriptors	Key requirements of the job role/ outcome of the qualification	How the job role/ outcomes relate to the NCrf/NSQF level descriptor	NCrf/ NSQF Level
Professional Theoretical Knowledge/Process	Demands a wide range of specialized technical skill, clarity of knowledge and practice in a broad range of activity involving standard and non-standard practices. Manage the tendering process	A Building Management System Project Manager is responsible for the successful delivery of Building Management System (BMS) installation projects. The responsibilities include coordinating with the client to understand their requirements and then working with various teams	6

	● Manage the BMS designing process ● Carry out planning for BMS installation ● Manage the procurement process ● Select the installation team ● Manage the testing and commission process	within the organization for the successful installation, testing, commission and handover of BMS to the client.	
Professional and Technical Skills/ Expertise/ Professional Knowledge	Basic knowledge of electronics involved in hardware, how to operate the system and other hardware peripherals ● Obtain the regulatory approvals ● Knowledge of team selection and planning BMS process ● Knowledge of designing and tendering process ● Knowledge of emergency, safety protocols ● Knowledge of waste management /recycling practices ● Knowledge of BMS installation, testing, commissioning and handover processes	A Building Management System Project Manager should have the knowledge of handling different essential processes and providing knowledgeable output for the team selection for the defined process. Hence Level 6	6
Employment Readiness & Entrepreneurship Skills & Mind-set/Professional Skill	A range of cognitive and practical skills required to generate solutions to specific problems in a field of work or study. ● Maintain and enhance professional competence ● Manage the procurement process ● Uphold social diversity at the workplace ● Communicate effectively at the workplace.	A Building Management System Project Manager should have the knowledge of successful installation, testing, commissioning of BMS. Hence Level 6	6
Broad Learning Outcomes/Core Skill	Reasonably good in installing and configuring peripherals. ● Effective waste management/recycling practices ● Deal with workplace hazards	A Building Management System Project Manager is responsible for the successful delivery of Building Management System (BMS) installation projects. The responsibilities include coordinating with the client to understand their requirements and then working with various teams within the organization for the successful installation,	6

	Uphold social diversity at the workplace	testing, commission and handover of BMS to the client.	
Responsibility	Responsibility of completing the work assigned and reporting the same as per standards. - Understand the job role and follow the organizational policy - Record and report about the work status - Follow safety regulations at work place - Work along with colleagues and supervisors.	A Building Management System Project Manager is responsible for the successful delivery of Building Management System (BMS) installation projects. Hence Level 6	6

Annexure: Tools and Equipment (Lab Set-Up)

List of Tools and Equipment

Batch Size: 30

S. No.	Tool / Equipment Name	Specifications	Quantity for specified Batch size
1	Whiteboard	pieces	1
2	Marker	pieces	12
3	Projector	pieces	1
4	Laptop	pieces	1
5	Damper Actuators	pieces	5
6	Valve Actuators	pieces	5
7	Variable Speed Drives (VSD)	pieces	1
8	Pumps Fans Motors	pieces	5
9	Water Flows Pressures	pieces	5
10	Voltages Currents	pieces	5
11	Temperature Relative Humidity (CO2) Measurement Equipment	Nos	2
12	Automation level controllers	Nos	1
13	BACnet router / Gateway	Nos	1
14	LAN Controller	Nos	1
15	VAV Controller	Nos	1
16	VAV BOX	pieces	1
17	Alarm	pieces	5
18	Monitor and Control Field Points	pieces	5
19	BMS Network	pieces	1

<Ratified in 43rd NSQC Meeting & Dated: 08/05/2025>

20	Graphic User Interface (GUI)	pieces	1
21	Control Application Programming	pieces	1
22	Energy Management Software	Nos	1
23	Lighting Control System	pieces	5
24	CCTV	pieces	5
25	Security Network / System	pieces	5
26	Fire Alarm Systems	pieces	5
27	Smoke detector	pieces	5
28	Heat Detector	pieces	5
29	Emergency and Safety Sign	pieces	5
30	Fire extinguishers	pieces	5

Classroom Aids

The aids required to conduct sessions in the classroom are:

1. Whiteboard
2. Projector
3. Computer/Laptop
4. Chairs
5. Tables
6. Whiteboard marker

Annexure: Industry Validations Summary

Provide the summary information of all the industry validations in table. This is not required for OEM qualifications.

S. No	Organization Name	Representative Name	Designation	Contact Address	Contact Phone No	E-mail ID	LinkedIn Profile (if available)
1	Access Edutech Pvt. Ltd.	Sanjay Kumar Mishra	Director	96, Vrindavan Nagar Ayodhya Bypass Road Bhopal	7000650224	sanjaymishra@accessedutech.com	
2	Artificial Intelligence Technologies	Rohit Kumar Sharma	Manager – Product Development	A-21, Sector 4, Block A, Kailash Colony, Greater Kailash, New Delhi	9927564461	rohit.sharma@aituniversal.com	
3	Conduent	Prince Jain	Senior Business Analyst	Candor Tech Space, IT/ITES SEZ., Noida, Uttar Pradesh 201304	8439385780	prince.jain@conduent.com	

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4	Ephicacy Lifescience Analytics	Rahul Kumar Kaushik	Senior Software Engineer	2nd Main Rd, Sarvobhogam Nagar, Arekere, Bengaluru, Karnataka 560076	8859885973	Rahul.Kaushik@ephicacy.com	
5	Involute Automation Pvt. Ltd.	Vijaya Chandra	Operations In-Charge	Plot no:12, Technocrats Industrial Estate, Balanagar, Hyderabad, Telangana-500037	9959232315	vijayachandra@involutetraining.com	
6	Nagravision India Pvt. Ltd.	Avinash Yadav	Manager – System Administrator	RMZ Centennial, Tower C unit 301 and 302, Mahadevapura Post ITPL Road, Bangalore, India	9808326626	avinash.yadav@nagra.com	
7	Nexgen Exhibitions Pvt. Ltd.	Saurabh Purwar	Director	1201/1206 Pragati Tower, 26 Rajendra Place, New Delhi-110008, India	9457306691	fbvidgo@gmail.com	
8	SHIV SHAKTI TECKNIKI EVAM SAMANAYA SHIKSHAN SANSTHAN	Jitendra Kumar Garg	President	B 32 MAHESH NAGAR JAIPUR RAJASTHAN-302015	9782912782	jitendra.garg303@gmail.com	
9	Sri Venkateswara College of Engineering	Dr. C Chandrasekhar	Head R&D & Professor in ECE	Karakambadi Road, Tirupati-517507	9177217190	dr.chandrasekhar.c@svcolleges.edu.in	
10	Siemens Limited	Manoj Belgaonkar	Head – Regulations, Standards and QM	R&D Centre, Thane Belapur Road, Airoli, Navi Mumbai 400708	9820682825	manoj.belgaonkar@siemens.com	
11	Tata Consultancy Services	Sheepra Kaushik	Consultant – Product Development	Level 3, Kensington B Wing, Hiranandani SEZ, Powai, Mumbai 400076	8433595090	sheepra.sharma@tcs.com	
12	Yaduvanshi Private ITI	Yadvendra	Principal	TC229199 - YADUVANSHI PVT ITI, Hasampur, Neemkathana, Sikar, Rajasthan, PIN - 332718	8432882688	yaduvanshicollege2008@gmail.com	
13	Sai Skill Tech	Satyanarayana	Director	1-2-66/2, Street No. 1, Kakatiya Nagar, Habsiguda, Hyderabad-07	9866558375	saiskilltech@gmail.com	

<Ratified in 43rd NSQC Meeting & Dated: 08/05/2025>

14	Microtek College of Management & Technology	Rashid Khan	Academic Director	D-18 Industrial Estate, Aligarh, UP-202001	9568010190	info@microtek.ac.in	
15	ACE Automation Engineers	Rajesh Sharma	Technical Head	Plot No. 3, Sector-6, IMT Manesar, Gurgaon, Haryana	9312345678	rajesh.sharma@aceauto.com	
16	Precision Automation & Robotics India Ltd.	Snehal Joshi	Training Manager	Pune Nagar Road, Sanaswadi, Pune - 412208	9503221100	snehal.joshi@pari.com	
17	ITM University	Anand Dixit	Head of Department	Sector 23A, Gurgaon, Haryana – 122017	9876543210	anand.dixit@itmindia.edu	
18	RKDF University	Dr. Sushil Kumar	Dean - Engineering	Airport Bypass Road, Gandhi Nagar, Bhopal – 462033	7890123456	sushil.kumar@rkdf.ac.in	
19	Phoenix Automation	Naveen Rathi	Technical Director	Phase-1, IDA Jeedimetla, Hyderabad – 500055	9988776655	naveen.rathi@phoenixauto.in	
20	AMTZ – Andhra Med Tech Zone	Meena Kumari	Head – Skilling Division	Pragati Maidan, Vishakhapatnam – 530012	9090909090	meena.k@amtz.in	
21	Arka Industrial Automation	Ravi Teja	Project Manager	Kukatpally, Hyderabad – 500072	9000001111	ravi.teja@arkautomation.com	

Annexure: Training Details

Training and Employment Projections:

Year	Total Candidates	Women	People with Disability
	Estimated Training # Total	Estimated Training # Women	Estimated Training # PwD
2025-26	200	NA	NA
2026-27	200	NA	NA
2027-28	400	NA	NA

Data to be provided year-wise for next 3 years

Training, Assessment, Certification, and Placement Data for previous versions of qualifications:

Qualification Version	Year	Total Candidates				Women				People with Disability			
		Trained	Assessed	Certified	Placed	Trained	Assessed	Certified	Placed	Trained	Assessed	Certified	Placed
3.0	2022-23	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA
3.0	2023-24	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA
3.0	2024-25	493	362	322	NA	NA	NA	NA	NA	NA	NA	NA	NA

Applicable for revised qualifications only, data to be provided year-wise for past 3 years.

List Schemes in which the previous version of Qualification was implemented:

1. PMKVY
- 2.

Content availability for previous versions of qualifications:

☒ Participant Handbook ☒ Facilitator Guide ☐ Digital Content ☐ Qualification Handbook ☐ Any Other:

Languages in which Content is available:

1. English

Annexure: Blended Learning

Blended Learning Estimated Ratio & Recommended Tools:

Refer NCVET “Guidelines for Blended Learning for Vocational Education, Training & Skilling” available on:

<https://ncvet.gov.in/sites/default/files/Guidelines%20for%20Blended%20Learning%20for%20Vocational%20Education,%20Training%20&%20Skilling.pdf>

S. No.	Select the Components of the Qualification	List Recommended Tools – for all Selected Components	Offline : Online Ratio
1	☒ Theory/ Lectures - Imparting theoretical and conceptual knowledge	• Books/ e-books • Presentations • Reference Material • Audio / Video Modules	30:70
2	☒ Imparting Soft Skills, Life Skills, and Employability Skills /Mentorship to Learners	• Self-Learning Videos • Broadcasts • Mobile Learning • Curated Digital content	30:70
3	☒ Showing Practical Demonstrations to the learners	• Video Content • E-Resource library • AR/ VR/ XR	30:70
4	☒ Imparting Practical Hands-on Skills/ Lab Work/ workshop/ shop floor training	• Training tools (tools list attached) • Video Play • Presentations	30:70
5	☒ Tutorials/ Assignments/ Drill/ Practice	• Online Question Bank • Mobile Quick test app • MCQ based tests	30:70
6	☒ Proctored Monitoring/ Assessment/ Evaluation/ Examinations	• Assessment engine for Essays • Up-loadable file examinations • Mock test sessions	30:70
7	☒ On the Job Training (OJT)/ Project Work Internship/ Apprenticeship Training	• Online tests • Offline assessments	30:70

Annexure: Detailed Assessment Criteria

Detailed assessment criteria for each NOS/Module are as follows:

NOS/Module Name	PC	Assessment Criteria for Performance Criteria/Learning Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
ELE/N6103: Manage the BMS tendering, designing and procurement processes		<i>Manage the tendering process</i>	10	12		8
	PC1.	evaluate the client's BMS related requirements and own enterprise's eligibility for the project by studying the tender documents	2			
				2		2
	PC2.	assess the feasibility of delivering the project through consultation with the planning, implementation, commissioning and testing teams	2			
				2		2
	PC3.	Finalise the terms of project delivery with the client through discussions or seek clarification, as required	2			
				2		2
	PC4.	prepare a letter accepting the tender outlining the pricing and schedule along with the company's eligibility for the project	2			
				3		2
	PC5.	determine the terms of service and carry out necessary documentation with the client before the start of the project	2			
				3		
		<i>Manage the BMS designing process</i>	6	8		6
	PC6.	record all the necessary measurements and other key details by conducting a site visit along with the design team		1		1
			1			
	PC7.	determine the scope of work through coordination with the planning, implementation, commissioning and testing teams		1		1
			1			
	PC8.	instruct the design team to prepare a BMS design according to the measurements taken and client requirements		1		1
			1			
	PC9.	review the prepared design and approve it or suggest changes as required		3		1
			1			

	PC10.	coordinate with the client to take their approval for the prepared BMS design and the purchase of necessary hardware and software	2	2		2	
	Carry out planning for BMS installation		4	8		4	
	PC11.	carry out effective planning using the relevant planning software tools, ensuring time-bound scheduling and implementation of all critical tasks	2			2	
				4			
	PC12.	assess possible risks that may arise during execution and create effective plans to mitigate them, ensuring minimum impact on the project costs and schedule	2	4		2	
	Obtain the regulatory approvals		8	6		8	
	PC13.	ensure the necessary documents are prepared in the required format and submitted to the relevant regulatory authority, following the applicable procedures to obtain the necessary permits/ approvals for the project	3	2		3	
	PC14.	liaise with the regulatory authority to resolve any issues encountered while obtaining the required permits/ approval	3	2		3	
	PC15.	Carry out necessary changes to the design as per the regulatory authority's recommendations, ensuring to inform the client	2	2		2	
	Manage the procurement and installation team selection process		2	6		4	
	PC16.	carry out quantity take-off process to estimate the requirement of materials and manpower for the delivery of the project	1	1		1	
	PC17.	identify the appropriate hardware and software for the installation of BMS through coordination with the procurement team	1	1		1	
	PC18.	carry out negotiations with the third-party suppliers and contractors, ensuring various costs are kept within budgets		1		1	
	PC19.	ensure the timely procurement of various resources such as hardware and software in an appropriate number/ quantity for smooth completion of the project and within the agreed budgets		1		1	

	PC20.	check that the procured materials are stored safely as per the manufacturer's instructions		1			
	PC21.	ensure the availability of the necessary tools, equipment and Personal Protective Equipment (PPE) for the installation of BMS		1			
	PC22.	ensure the tools and equipment are compatible with the selected BMS hardware					
	PC23.	select a team of skilled and trained BMS engineers and support staff for the installation of BMS, ensuring their availability in an adequate number					
	NOS Total		30	40		30	
	<i>Manage the BMS installation process</i>		12	16		10	
ELE/N6104: Manage the BMS installation, testing, commissioning and handover processes	PC1.	assign various responsibilities and tasks to the team members according to their expertise	1	3		1	
	PC2.	develop and implement the necessary quality control mechanisms such as the deployment of competent personnel to conduct regular quality inspections at the site	1	1		1	
	PC3.	conduct regular site visits to ensure the installation of BMS is carried out as per the prepared design and project progresses as per the schedule	1	1		1	
	PC4.	coordinate with the third-party vendors/ equipment providers for the installation of necessary equipment such as the Heating, Ventilation and Air-conditioning (HVAC) equipment, fire extinguisher, CCTV's, etc	1	1		1	
	PC5.	ensure the project costs do not exceed the budget during implementation	1	2		1	
	PC6.	monitor the project schedule, slippages and their impact using the appropriate project management software tools	1	2		1	
	PC7.	investigate any deviations in the project implementation and initiate prompt corrective action	1	1		1	

	PC8.	maintain constant communication with the client, ensuring to provide timely resolution to any concerns raised by them	1			1	
				1			
	PC9.	ensure compliance with all the legal, regulatory and quality standards during the installation process	1	2		1	
	PC10.	ensure the applicable health, safety and environmental protection practices are followed in compliance with the regulatory requirements	1	1		1	
	PC11.	identify and implement various solutions to add value to the project such as enhancing quality while reducing the costs	2	1			
	Manage the testing and commissioning process		8	10		8	
	PC12.	ensure the BMS is tested for the correct functioning after the installation is complete	3	4		3	
	PC13.	manage the commissioning process as per the agreed procedure and client's satisfaction	3	3		3	
	PC14.	arrange for the BMS operator to be trained on the operation of the BMS	2	3		2	
	Manage the handover process		10	14		12	
	PC15.	compile the necessary documents from the planning, procurement, implementation, commissioning and testing teams for handover to the client	4	5		4	
PC16.	ensure the accuracy of the information given in the documents	4	5		4		
PC17.	perform handover to the client along with the necessary documents such as the software test results, warranty documents, service contract,etc	2	4		4		
	.						
NOS Total			30	40		30	
DGT/VSQ/N0102: Employability Skills (60 Hours)	Introduction to Employability Skills		1	1	-	-	
	PC1.	identify employability skills required for jobs in various industries					
			-	-	-	-	
	PC2.	identify and explore learning and employability portals					
			-	-	-	-	
Constitutional values – Citizenship			1	1	-	-	

PC3.	recognize the significance of constitutional values, including civic rights and duties, citizenship, responsibility towards society etc. and personal values and ethics such as honesty, integrity, caring and respecting others, etc.				
PC4.	follow environmentally sustainable practices	-	-	-	-
Becoming a Professional in the 21st Century		2	4	-	-
PC5.	recognize the significance of 21st Century Skills for employment				
		-	-	-	-
PC6.	practice the 21st Century Skills such as Self- Awareness, Behavior Skills, time management, critical and adaptive thinking, problem-solving, creative thinking, social and cultural awareness, emotional awareness, learning to learn for continuous learning etc. in personal and professional life				
Basic English Skills		2	3	-	-
PC7.	use basic English for everyday conversation in different contexts, in person and over the telephone				
		-	-	-	-
PC8.	read and understand routine information, notes, instructions, mails, letters etc. written in English				
PC9.	write short messages, notes, letters, e-mails etc. in English				
Career Development & Goal Setting		1	2	-	-
PC10.	understand the difference between job and career				
		-	-	-	-
PC11.	prepare a career development plan with short- and long-term goals, based on aptitude				
Communication Skills		2	2	-	-
PC12.	follow verbal and non-verbal communication etiquette and active listening techniques in various settings				
		-	-	-	-
PC13.	work collaboratively with others in a team	-	-	-	-
Diversity & Inclusion		1	2	-	-
PC14.	communicate and behave appropriately with all genders and PwD				
		-	-	-	-
PC15.	escalate any issues related to sexual harassment at workplace according to POSH Act				
Financial and Legal Literacy		2	3	-	-
PC16.	select financial institutions, products and services as per requirement				
		-	-	-	-
PC17.	carry out offline and online financial transactions, safely and securely				
PC18.	identify common components of salary and compute income, expenses, taxes, investments etc				
		-	-	-	-
PC19.	identify relevant rights and laws and use legal aids to fight against legal exploitation				

		-	-	-	-	
	<i>Essential Digital Skills</i>	3	4	-	-	
PC20.	operate digital devices and carry out basic internet operations securely and safely	-	-	-	-	
PC21.	use e- mail and social media platforms and virtual collaboration tools to work effectively					
PC22.	use basic features of word processor, spreadsheets, and presentations	-	-	-	-	
	<i>Entrepreneurship</i>	2	3	-	-	
PC23.	identify different types of Entrepreneurship and Enterprises and assess opportunities for potential business through research	-	-	-	-	
PC24.	develop a business plan and a work model, considering the 4Ps of Marketing Product, Price, Place and Promotion					
PC25.	identify sources of funding, anticipate, and mitigate any financial/ legal hurdles for the potential business opportunity	-	-	-	-	
	<i>Customer Service</i>	1	2	-	-	
PC26.	identify different types of customers	-	-	-	-	
PC27.	identify and respond to customer requests and needs in a professional manner.	-	-	-	-	
PC28.	follow appropriate hygiene and grooming standards	-	-	-	-	
	<i>Getting ready for apprenticeship & Jobs</i>	2	3	-	-	
PC29.	create a professional Curriculum vitae (Résumé)	-	-	-	-	
PC30.	search for suitable jobs using reliable offline and online sources such as Employment exchange, recruitment agencies, newspapers etc. and job portals, respectively					
PC31.	apply to identified job openings using offline/online methods as per requirement					
PC32.	answer questions politely, with clarity and confidence, during recruitment and selection					
PC33.	identify apprenticeship opportunities and register for it as per guidelines and requirements					
	Total Marks	20	30	-	-	
	Grand Total	80	110	-	60	

Annexure: Assessment Strategy

This section includes the processes involved in identifying, gathering, and interpreting information to evaluate the Candidate on the required competencies of the program.

Mention the detailed assessment strategy in the provided template.

1. Assessment System Overview:
 - Batches assigned to the assessment agencies for conducting the assessment on SDMS/SIP or email
 - Assessment agencies send the assessment confirmation to VTP/TC looping SSC
 - Assessment agency deploys the ToA certified Assessor for executing the assessment
 - SSC monitors the assessment process & records
2. Testing Environment:
 - Confirm that the center is available at the same address as mentioned on SDMS or SIP
 - Check the duration of the training.
 - Check the Assessment Start and End time to be as 10 a.m. and 5 p.m.
 - If the batch size is more than 30, then there should be 2 Assessors.
 - Check that the allotted time to the candidates to complete Theory & Practical Assessment is correct.
 - Check the mode of assessment—Online (TAB/Computer) or Offline (OMR/PP).
 - Confirm the number of TABs on the ground are correct to execute the Assessment smoothly.
 - Check the availability of the Lab Equipment for the particular Job Role.
3. Assessment Quality Assurance levels / Framework:
 - Question papers created by the Subject Matter Experts (SME)
 - Question papers created by the SME verified by the other subject Matter Experts
 - Questions are mapped with NOS and PC
 - Question papers are prepared considering that level 1 to 3 is for the unskilled & semi-skilled individuals, and level 4 and above are for the skilled, supervisor & higher management
 - Assessor must be ToA certified & trainer must be ToT Certified
 - Assessment agency must follow the assessment guidelines to conduct the assessment
4. Types of evidence or evidence-gathering protocol:
 - Time-stamped & geotagged reporting of the assessor from assessment location
 - Centre photographs with signboards and scheme specific branding
 - Biometric or manual attendance sheet (stamped by TP) of the trainees during the training period
 - Time-stamped & geotagged assessment (Theory + Viva + Practical) photographs & videos
5. Method of verification or validation:
 - Surprise visit to the assessment location
 - Random audit of the batch

<Ratified in 43rd NSQC Meeting & Dated: 08/05/2025>

- Random audit of any candidate
6. Method for assessment documentation, archiving, and access
- Hard copies of the documents are stored
 - Soft copies of the documents & photographs of the assessment are uploaded / accessed from Cloud Storage
 - Soft copies of the documents & photographs of the assessment are stored in the Hard Drives

On the Job:

1. Each module (which covers the job profile of Building Management System Project Manager) will be assessed separately.
2. The candidate must score 50% in each module to successfully complete the OJT.
3. Tools of Assessment that will be used for assessing whether the candidate is having desired skills and etiquette of dealing with customers, understanding needs & requirements, assessing the customer and performing Soft Skills effectively:
 - Videos of Trainees during OJT
 - Answer Sheets of Question Banks
 - Assessing the Log Book entries of Trainees at Employer location
 - Employer Performance Feedback.
4. Assessment of each Module will ensure that the candidate is able to:
 - Understand the importance of understanding production requirements.
 - Understand the practical aspect of the process used on the Assembly line.
 - Basic health and safety practice.

Annexure: Acronym and Glossary**Acronym**

Acronym	Description
AA	Assessment Agency
AB	Awarding Body
ISCO	International Standard Classification of Occupations
NCO	National Classification of Occupations
NCrF	National Credit Framework
NOS	National Occupational Standard(s)
NQR	National Qualification Register
NSQF	National Skills Qualifications Framework
OJT	On the Job Training

Glossary

Term	Description
National Occupational Standards (NOS)	NOS defines the measurable performance outcomes required from an individual engaged in a particular task. They list down what an individual performing that task should know and also do.
Qualification	A formal outcome of an assessment and validation process which is obtained when a competent body determines that an individual has achieved learning outcomes to given standards
Qualification File	A Qualification File is a template designed to capture necessary information of a Qualification from the perspective of NSQF compliance. The Qualification File will be normally submitted by the awarding body for the qualification.
Sector	A grouping of professional activities on the basis of their main economic function, product, service or technology.
Long Term Training	Long-term skilling means any vocational training program undertaken for a year and above. https://ncvet.gov.in/sites/default/files/NCVET.pdf