



QUALIFICATION FILE

AI DevOps Analyst

- ☒ 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: 5

Submitted By:

IT-ITes Sector Skills Council NASSCOM (SSC NASSCOM)

Plot No. – 7, 8, 9 & 10

Sector – 126, Noida, Uttar Pradesh - 201303

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Section 1: Basic Details

1.	Qualification Name	AI DevOps Analyst	
2.	Sector/s	IT/ITeS	
3.	Type of Qualification: ☐ New ☒ Revised ☐ Has Electives/Options ☐ OEM	NQR Code & version of the existing /previous qualification: QG-05-IT-01531-2023-V1.1-NASSCOM & Version 3	Qualification Name of the existing/previous version: AI DevOps Analyst
4.	a.OEM Name b. Qualification Name (Wherever applicable)	AI DevOps Analyst	
5.	National Qualification Register (NQR) Code &Version (Will be issued after NSQC approval)	TBD & Version 4	6. NCrF/NSQF Level: 5
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 DevOps Engineer is a key player in the software development lifecycle, responsible for bridging the gap between development, operations, and quality assurance teams. They design and maintain Continuous Integration and Continuous Delivery (CI/CD) pipelines to automate testing, building, and deployment processes, ensuring high-quality software delivery at speed. Utilizing tools like Terraform and Ansible, they automate the provisioning and configuration of infrastructure across various environments, while also implementing monitoring and logging solutions to optimize application performance. DevOps Engineers incorporate security practices (DevSecOps) into the development lifecycle, manage incident response strategies, and emphasize collaboration and documentation to foster continuous improvement within the organization. Through these efforts, they ensure that applications are robust, scalable, and aligned with business objectives..	
9.	Eligibility Criteria for Entry for a Student/Trainee/Learner/Employee	a. Entry Qualification & Relevant Experience: ** Relevant Experience: AI/Computer Science/IT The relevant experience would include work, internship and apprenticeship undertaken post-completion of relevant educational qualifications. * PG/UG/diploma with courses related to Engg./ Science	

		<table border="1"> <tr> <th>S. No.</th><th>Academic/Skill Qualification (with Specialization - if applicable)</th><th>Required Experience (with Specialization - if applicable)</th></tr> <tr> <td>1</td><td>Completed UG Diploma*</td><td>-</td></tr> <tr> <td>2</td><td>Completed 3Y Diploma* after 10th</td><td>1.5 Years of relevant experience**</td></tr> <tr> <td>3</td><td>Previous Relevant qualification of NSQF level 4.5</td><td>1.5 years of relevant experience**</td></tr> </table> b. Age: NA	S. No.	Academic/Skill Qualification (with Specialization - if applicable)	Required Experience (with Specialization - if applicable)	1	Completed UG Diploma*	-	2	Completed 3Y Diploma* after 10 th	1.5 Years of relevant experience**	3	Previous Relevant qualification of NSQF level 4.5	1.5 years of relevant experience**							
S. No.	Academic/Skill Qualification (with Specialization - if applicable)	Required Experience (with Specialization - if applicable)																			
1	Completed UG Diploma*	-																			
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3	Previous Relevant qualification of NSQF level 4.5	1.5 years of relevant experience**																			
10.	Credits Assigned to this Qualification, Subject to Assessment (<i>as per National Credit Framework (NCrF)</i>)	16 Credits	11. Common Cost Norm Category (I/II/III) (<i>wherever applicable</i>): II																		
12.	Any Licensing Requirements for Undertaking Training on This Qualification (<i>wherever applicable</i>)	NA																			
13.	Training Duration by Modes of Training Delivery (<i>Specify Total Duration as per selected training delivery modes and as per requirement of the qualification</i>)	☐ Offline Only ☐ Online Only ☒ Blended																			
		<table border="1"> <tr> <th>Training Delivery Mode</th><th>Theory (Hours)</th><th>Practical (Hours)</th><th>OJT (Mandatory) Hours</th><th>OJT (Recommended) Hours</th><th>Total (Hours)</th></tr> <tr> <td>Classroom (offline)</td><td>204</td><td>186</td><td>90</td><td>-</td><td>480</td></tr> <tr> <td>Online</td><td>204</td><td>186</td><td>90</td><td>-</td><td>480</td></tr> </table> (Refer Blended Learning Annexure for details)		Training Delivery Mode	Theory (Hours)	Practical (Hours)	OJT (Mandatory) Hours	OJT (Recommended) Hours	Total (Hours)	Classroom (offline)	204	186	90	-	480	Online	204	186	90	-	480
Training Delivery Mode	Theory (Hours)	Practical (Hours)	OJT (Mandatory) Hours	OJT (Recommended) Hours	Total (Hours)																
Classroom (offline)	204	186	90	-	480																
Online	204	186	90	-	480																
14.	Aligned to NCO/ISCO Code/s (<i>if no code is available mention the same</i>)	NCO-2015/251.NIL																			
15.	Progression Path After Attaining the Qualification, wherever applicable (<i>Please show Professional and Academic progression</i>)	This entry should refer to one or more of the following: • Academic Progression: Access to other qualifications at the same NSQF level – Database Administrator, Data Steward • Professional Progression: Access to related qualification(s) at the next NSQF level – AI-Solution Architect																			

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 Amenable to Persons with Disability	☒ Yes ☐ No If "Yes", specify applicable type of Disability: Visual, Hearing or Speech impairment, Locomotor Disability	
19.	How participation of women will be encouraged?	The Program is gender neutral although to increase the women participation, organizations are keeping aside few seats to encourage the female candidates	
20.	Are Greening/Environment Sustainability Aspects covered (Specify the NOS/Module which Covers it)	☒ Yes ☐ No, DGT/VSQ/N0102: Employability Skills (60 Hours)	
21.	Is Qualification suitable to be offered in Schools/Colleges	Schools: ☐ Yes ☒ No Colleges ☒ Yes ☐ No	
22.	Name and Contact Details Submitting / Awarding Body SPOC (In case of CS or MS, provide details of both Lead AB & Supporting ABs)	Name: Namrata Kapur Email: Standards@nasscom.in Contact No.: 0120-4990111 Website: https://www.sscnasscom.com/	
23.	Final Approval Date by NSQC: 07 th October 2025	24. Validity Duration: 3 Years	25. Next Review Date: 07 th October 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 curriculum document.

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

S.No.	NOS/Module Name	NOS/Module Code & Version (if applicable)	Core/Non-Core	NCrF/N SQF Level	Credits as per NCrF	Training Duration (Hours)					Assessment Marks					
						Th.	Pr.	OJT-Man.	OJT-Rec.	Total	Th.	Pr.	Pr oj.	Vi va	Total	Weightage (%) (if applicable)
1.	Develop tools, processes and mechanisms for continuous integration and delivery.	SSC/N8120 V5.0	Core	5	04	50:00	40:00	30:00	00:00	120:00	30	50	-	20	100	30
2.	Develop and maintain CI/CD Pipelines	SSC/N8155 ,V1.0	Core	5	05	65:00	55:00	30:00	00:00	150:00	30	50	-	20	100	30
3.	Infrastructure management for training & deploying AI models	SSC/N8156, V1.0	Core	5	05	65:00	55:00	30:00	00:00	150:00	30	50	-	20	100	30
4.	Employability NOS (60 Hrs)	DGT/VSQ/ N0102 V1.0	Non-Core	4	02	24:00	36:00	00:00	00:00	60:00	20	30	-	-	50	10
Duration (in Hours) / Total Marks					16	204:00	186:00	90:00	00:00	480:00	110	180	-	60	350	100

Elective NOS/s:

S. No	NOS/Module Name	NOS/Module Code & Version (if applicable)	Core/Non-Core	NCrF/NS QF 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/NS QF 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																

Assessment - Minimum Qualifying Percentage

Assessment - Minimum Qualifying Percentage

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.)

Section 3: Training Related

1.	Trainer's Qualification and experience in the relevant sector (in years) (as per NCVET guidelines)	Educational Qualification: Graduate (Engineering/ Technology/ Computer Science)
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		Industry & training experience: 2 years of industry experience in AIBDA. The industry experience would include work, internship, and apprenticeship undertaken after regular graduation Certification: “Trainer” mapped to the Qualification Pack “MEP/Q2601” Minimum accepted score is 80% aggregate
2.	Master Trainer’s Qualification and experience in the relevant sector (in years) (as per NCVET guidelines)	Educational Qualification: Graduate (Engineering/ Technology/ Computer Science) Industry & training experience: 4 years of industry experience in AIBDA. The full-time experience would include work, internship, and apprenticeship undertaken after regular graduation. Certification: “Master Trainer” mapped to the Qualification Pack “MEP/Q2602” Minimum accepted score is 90% aggregate
3.	Tools and Equipment Required for the 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)	Educational Qualification: Graduate (Engineering/ Technology/ Computer Science) Industry & Training Experience: 2 years of industry experience in AIBDA. The full-time experience would include work, internship, and apprenticeship undertaken after regular graduation. Certification: “Assessor” mapped to the Qualification Pack “MEP/Q2701” Minimum accepted score is 80% aggregate.
2.	Proctor’s Qualification and experience in relevant sector (in years) (as per NCVET guidelines), (wherever applicable)	Educational Qualification: Graduate (Engineering/ Technology/ Computer Science) Industry & Training Experience: 2 years of industry experience in AIBDA. The full-time experience would include work, internship, and apprenticeship undertaken after regular graduation. Certification: “Assessor” mapped to the Qualification Pack “MEP/Q2701” Minimum accepted score is 80% aggregate.

3.	Lead Assessor's/Proctor's Qualification and experience in relevant sector (in years) (as per NCVET guidelines)	Educational Qualification: Graduate (Engineering/ Technology/ Computer Science) Industry & Training Experience: 4 years of industry experience in AIBDA. The full-time experience would include work, internship, and apprenticeship undertaken after regular graduation. Certification: "Lead Assessor" mapped to the Qualification Pack "MEP/Q2702" Minimum accepted score is 90% aggregate.
4.	Assessment Mode (Specify the assessment mode)	The assessment will consist of a blend of hands-on practical evaluations, viva-voce, and online proctored scenario-based multiple-choice questions ensuring a thorough evaluation of the individual's proficiency in learning outcomes, practical understanding, and real-world application of concepts.
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): Industry Initiative
4.	Number of industry validations provided: 21
5.	Estimated number of people to be trained and employed: NA
6.	Evidence of Concurrence/Consultation with Line/State Departments: Applied 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/NSQF descriptors <i>(Mandatory)</i>	Evidence of Level
2.	Annexure: List of tools and equipment relevant for NOS <i>(Mandatory, except in case of online course)</i>	Tools and Equipment (lab set-up)
3.	Annexure: Detailed Assessment criteria <i>(Mandatory)</i>	Performance Criteria Details
4.	Annexure: Assessment Strategy <i>(Mandatory)</i>	Assessment Strategy
5.	Annexure: Blended Learning <i>(Mandatory, in case selected Mode of delivery is Blended Learning)</i>	NA
6.	Annexure: Multiple Entry Exit Details <i>(Mandatory, in case qualification has multiple entry-exit)</i>	NA
7.	Annexure: Acronym and Glossary <i>(Optional)</i>	Acronym and Glossary
8.	Supporting Document: Model Curriculum <i>(Mandatory-Public View)</i>	MC_SSCQ8112_AI DevOps Analyst _V4
9.	Supporting Document: Career Progression <i>(Mandatory-Public View)</i>	AI BDA Occupational Map
10.	Supporting Document: Occupational Map <i>(Mandatory)</i>	AI BDA Occupational Map
11.	Supporting Document: Assessment SOP <i>(Mandatory)</i>	NA
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	- Design and develop staging environments before production - Deploy, automate and maintain production systems	The individual in this role must work in a constantly changing environment where he/she collaborates with both internal and external stakeholders to	5

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
	- Handle build, release and configuration management of production systems - Manage and provision computer data centers through machine-readable definition files - Troubleshoot and solve system issues across platform and application domains - Ensure availability, performance and scalability of production systems	develop mechanisms for continuous integration and delivery. To perform his/her role effectively, the individual needs to combine a knowledge of the processes used within the organization, the tools used across the industry and develop mechanisms accordingly.	
Professional and Technical Skills/ Expertise/ Professional Knowledge	- Different configuration management tools such as Puppet, Chef - Different continuous integration tools such as Jenkins, Travis CI, Bamboo - Different application release automation tools such as BuildMaster, Puppet, FlexDeploy - Different build automation tools such as Gradle, Jenkins - Different application lifecycle management tools such as GitLab, JIRA - Different test and QA automation tools such as selenium	The individual in the role must have a vast amount of knowledge regarding various tools used for DevOps processes. These include tools for configuration management, continuous integration, automation and testing. He/she needs to have deep theoretical knowledge of these processes.	5
Employment Readiness & Entrepreneurship Skills & Mind-set/Professional Skill	- Work on various operating systems such as linux, ubuntu, or windows - Design and develop staging environments - Define and execute continuous testing and automated QA processes	The role demands that the individual has acquired the practical skills to develop tools and mechanisms for continuous integration and delivery. The individual needs the analytical ability	5

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
		to apply these skills effectively to generate optimal solutions.	
Broad Learning Outcomes/Core Skill	- Continuously evaluate new technology options and vendor products - Define and communicate continuous delivery and integration strategies - Continuously evaluate different continuous delivery and deployment models - Continuously evaluate different methodological approaches to testing such as unit and integration testing	The individual must possess in depth knowledge of the technology trends, products and methodologies used both within the organization and outside it. He/she must understand larger business, technological and regulatory trends and stay updated in latest developments. This would enable him/her to develop the mechanisms in line with existing industry practices.	5
Responsibility	- Listen effectively and orally communicate information accurately with attention to details - Check your work is complete and free from errors - Make decisions on suitable courses of action - Apply balanced judgements to different situations - Ask for clarification and advice from appropriate people - Build and maintain positive and effective relationships with clients - Check that your own and/or your peers' work meets customer requirements	The role demands working in a team to deploy continuous integration solutions. This may involve helping peers with their work from time to time and providing feedback and advice to help improve the quality of their work. Since this role is likely to have people reporting to it, the individual performing this role is supposed to take responsibility for the output and the development of the entire team.	5

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
	- Plan and organize your own work to achieve targets and deadlines - Work with colleagues to deliver shared goals		

Annexure: Tools and Equipment (lab set-up)

List of Tools and Equipment

Batch Size:

S. No.	Tool / Equipment Name	Specification	Quantity for specified Batch size
1	PC/Laptop with internet		
2	Project Management and Collaboration tools	Trello, Jira, Miro- open source	
3	Version Control and CI/CD tools	Git, GitLab, Jenkins, Travis - open source	
4	Infrastructure as Code and Configuration Management tools	Terraform, Ansible, Chef, Puppet - open source	
5	Monitoring and Logging tools	Prometheus, Grafana, ELK Stack (Elasticsearch, Logstash, Kibana), Fluentd - open source	
6	Security tools	Snyk, OWASP ZAP, HashiCorp Vault - open source	
7	Testing tools	Junit, pytest, Selenium, Cypress - open source	
8	Backup and Disaster Recovery tools	AWS Backup, Azure Site Recovery - open source	
9	Cost Management tool	AWS Cost Explorer, Azure Cost Management - open source	
10	Additional Software	Docker, Kubernetes - open source	

- Tools are open source

Classroom Aids

The aids required to conduct sessions in the classroom are:

- White Board

2. White Board Marker
3. Projector

Annexure: Industry Validations Summary

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

S. No	Organisation Name	Representative Name	Designation	Contact Address	Contact Phone No	E-mail ID	LinkedIn Profile
1	Infosys	Vivek Pilaniya	Program Manager	Infosys, delhi	9718423 687	vivek.pilania@infosys.com	https://www.linkedin.com/in/vivek-pilania-iimc
2	IBM	Arpita Majumder	Tech Consultant	IBM DLF Park 1	7894369 677	Arpita.majumder@ibm.com	https://www.linkedin.com/in/arpita-majumder-85612a67/
3	Mindshare (Inclusive Minds)	Pamindar Singh	Team Lead		8713901 984	paminder.singh@themindshare.in	https://www.linkedin.com/in/paminder-singh-7990b8101/
4	Freelance SME (Ex-3i Infotech)	Rishi Agrawal	Ex-SVP and Global Delivery Head – Automations, Applications and Analytics	-	7702191 049	agrishi@gmail.com	https://www.linkedin.com/in/agris-hi/
5	Acolyte	Saranya	Research Analyst		9944313 170	saranyakathir128@gmail.com	
6	Verizon	Sudeesh Sankaravel	Fellow Data Scientist	-	9176433 113	sudeesh.sankaravel@verizon.com	https://www.linkedin.com/in/sudeesh-sankaravel
7	Amazon	Asvin Ragav R	Data Associate		9994308 478	asvinragav16@gmail.com	
8	Sutherland	Nausath Raja	Sr. Director-Platform Solutions Group	-	9940113 955	naushathraja.mohammed@sutherlandglobal.com	https://www.linkedin.com/in/naushath-ath-raja-mohammed-4b7080b6/

9	Forbes Advisor	Naveenkumar Janakiraman	Data Research Analyst		9976773109	naveenkumarj4997@gmail.com	https://www.linkedin.com/in/naveenkumar-janakiraman
10	Frontier	Santhosh kumar S	DevOps L1		9655747400	santhoshselvaraj24031998@gmail.com	
11	Accolite Digital	Ayushmaan Pandey	Senior Software Engineer	-	8077386365	ayushmaan.pandey@accolitedigital.com	https://www.linkedin.com/in/ayushmaanpandey
12	Impekable	sreepathi.D	Lead Market Research and Business Development		9655036999	sanjeevsree22@gmail.com	
13	Data Switch	Thilak hariharaSudhan A	Product Engineer	DataSwitch, Chennai	6393798750	thilakhariharan@gmail.com	https://www.linkedin.com/in/thilak-hariharasudhan-43a89b269/
14	Kornferry	Ragul	Data analyst	-	9659964881	ragulbloop143@gmail.com	https://www.linkedin.com/in/ragul-kumar-b2297a171/
15	Navitas life sciences Chennai	Gowtham K V	Junior Research associate	-	9994594693	gg17165322@gmail.com	
16	Intellibren	Kailash PD	Director	Intellibren services LLP	6374700185	kailash@intellibren.com	-
17	Openweaver	Ashok Balasubramanian	Founder & CEO	-	9962548366	ashok@openweaver.com	https://www.linkedin.com/in/ashok-balasubramanian/
18	Upgrad	Samneesh Sharma	Sr Manager-project delivery		8679334000	shamneesh.sharma@upgrad.com	https://www.linkedin.com/in/shamneeshsharma1987/
19	Q Acadmey	Deepak Gour	Product and Academic Head	-	9893554394	deepak@qacademy.ca	https://ca.linkedin.com/in/deepak-gour-8853968
20	Tata consultancy services	Karthiga N	Test Analyst	-	7092257551	karthiga0115@gmail.com	
21	Wipro	Narendra Nande	Practice Director (VLSI SW and PSV Practice)	-	9900086708	narendra.nande@wipro.com	https://www.linkedin.com/in/narendra-nande-84402a2/

Annexure: Training & Employment Details

Training & Employment Projections:

Year	Total Candidates	Women	People with Disability
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	Estimated Training #	Estimated Employed Opportunities	Estimated Training #	Estimated Employed Opportunities	Estimated Training #	Estimated Employed Opportunities

Data to be provided year-wise for the 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	Trained	Assessed	Certified	Trained	Assessed	Certified

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

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

1.

Content availability for previous version of qualifications:

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

Language in which content is available:

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	NA	NA

2	☐ Imparting Soft Skills, Life Skills, and Employability Skills /Mentorship to Learners	NA	NA
3	☐ Showing Practical Demonstrations to the learners	NA	NA
4	☐ Imparting Practical Hands-on Skills/ Lab Work/ workshop/ shop floor training	NA	NA
5	☐ Tutorials/ Assignments/ Drill/ Practice	NA	NA
6	☐ Proctored Monitoring/ Assessment/ Evaluation/ Examinations	NA	NA
7	☐ On the Job Training (OJT)/ Project Work Internship/ Candidate Training	NA	NA

Annexure: Detailed Assessment Criteria

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

NOS/Module Name	Assessment Criteria for Performance Criteria/Learning Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
SSC/N8120: Develop tools, processes and mechanisms for continuous integration and delivery	PC.1 Grasp the high-level goals of the project, including desired outcomes, customer needs, and success criteria.	2	3	-	1
	PC.2 Identify key stakeholders and their expectations to ensure the project aligns with business objectives and customer requirements.	2	3	-	1
	PC.3 Understand the software development methodology being used and how it impacts collaborative practices and project timelines.	2	4	-	2
	PC.4 Familiarize with version control systems and the established workflow for code collaboration.	2	4	-	2
	PC.5 Comprehend the pipeline setup for continuous integration and continuous delivery.	2	4	-	2
	PC.6 Understand the testing strategies that are integrated into the CI/CD pipeline to ensure quality.	2	4	-	2
	PC.7 Assess the infrastructure requirements for the application, including scaling considerations, cloud services, and resource allocation.	2	4	-	2

NOS/Module Name	Assessment Criteria for Performance Criteria/Learning Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
	PC.8 Familiarity with tools and practices that ensure the infrastructure is maintained consistently across different environments	2	3	-	1
	PC.9 Identify the metrics that will be monitored to measure application performance, system health, and user experience in production.	2	3	-	1
	PC.10 Understand how logging will be implemented for troubleshooting and performance analysis, including the tools used for log aggregation and analysis.	2	3	-	1
	PC.11 Recognize the importance of integrating security measures within the development and deployment processes to mitigate risks.	2	3	-	1
	PC.12 Be aware of any regulatory or compliance requirements that the software must adhere to, which may influence design and operational practices.	2	3	-	1
	PC.13 Understand how user feedback will be collected and used to inform development, identify issues, and enhance product features.	2	3	-	1
	PC.14 A clear understanding of how incidents will be handled, including procedures for diagnosing issues, communication protocols, and recovery strategies.	2	3	-	1
	PC.15 Knowledge of disaster recovery strategies to ensure business continuity in case of critical system failures.	2	3	-	1
	Total Marks	30	50	-	20
SSC/N8155: Develop and maintain CI/CD pipelines	PC.1 Define continuous delivery and integration strategies and participate in Agile ceremonies to align team efforts and adjust workflows accordingly	3	5	-	2
	PC.2 Outline key stages of the pipeline such as build test deploy and release and select appropriate tools to support each stage based on project needs	3	5	-	2
	PC.3 Configure triggers webhooks and repository structures to automate pipeline execution upon code changes and facilitate collaboration using branching strategies	3	5	-	2
	PC.4 Write build scripts and set up artifact repositories to compile source code generate build artifacts and store them for future use	3	5	-	2
	PC.5 Automate testing at various levels including unit integration and end-to-end functional tests and integrate them into the pipeline	3	5	-	2
	PC.6 Manage environment configurations and scripts for automated deployment	3	5	-	2
	PC.7 Integrate monitoring tools and logging frameworks to track application performance and enable troubleshooting	3	5	-	2
	PC.8 Keep CI/CD tools dependencies and security scanning up to date and employ secret management solutions to handle sensitive data securely	3	5	-	2
	PC.9 Establish notifications for team alerts and collect metrics such as build success rates deployment frequency and test coverage for ongoing process improvement	3	5	-	2

NOS/Module Name	Assessment Criteria for Performance Criteria/Learning Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
	PC.10 Document pipeline workflows configurations and troubleshooting procedures to ensure maintainability and facilitate knowledge sharing	3	5	-	2
	Total Marks	30	50	-	20
SSC/N8156: Infrastructure management for training and deploying AI models	PC.1 Use tools to automate the provisioning of infrastructure components enabling consistent environments across development.	1	2	-	1
	PC.2 Store infrastructure code in version control systems to track changes over time and enable collaboration among teams.	1	2	-	1
	PC.3 Utilize configuration management tools to automatically configure servers and applications to maintain consistent states	1	2	-	1
	PC.4 Ensure that all environments are configured according to the same standards to minimize discrepancies.	1	2	-	1
	PC.5 Implement monitoring tools to collect metrics on infrastructure performance and resource utilization	1	2	-	1
	PC.6 Monitor application performance to identify bottlenecks or issues related to infrastructure.	1	2	-	1
	PC.7 Implement auto scaling solutions to automatically adjust resources based on traffic or workload demands	1	2	-	1
	PC.8 Use load balancers to distribute incoming traffic across multiple servers	1	2	-	1
	PC.9 Set up automated backup solutions for critical data and applications to ensure recovery options are readily available.	1	2	-	1
	PC.10 Develop and test disaster recovery plans including failover strategies to ensure business continuity.	1	2	-	1
	PC.11 Implement security practices by incorporating security scans and compliance checks into CICD pipelines.	2	3	-	1
	PC.12 Apply role-based access controls and regularly audit permissions to maintain a secure infrastructure.	2	3	-	1
	PC.13 Create and implement plans for responding to infrastructure incidents for diagnosis and resolution	2	3	-	1
	PC.14 Conduct thorough analyses of incidents to identify and address underlying issues preventing future occurrences	2	3	-	1
	PC.15 Schedule and automate updates to keep the infrastructure secure and upto date	2	3	-	1
	PC.16 Before deploying updates, test them in staging environments to mitigate risks associated with changes.	2	3	-	1
	PC.17 Maintain comprehensive and up-to-date documentation	2	3	-	1

NOS/Module Name	Assessment Criteria for Performance Criteria/Learning Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
	PC.18 Encourage collaboration and knowledge sharing within teams to foster a culture of learning and adaptability.	2	3	-	1
	PC.19 Establish mechanisms for collecting feedback on infrastructure performance and areas for improvement using insights to refine processes	2	3	-	1
	PC.20 Regularly evaluate and adopt new technologies and tools that can enhance infrastructure efficiency and support evolving business needs.	2	3	-	1
	Total Marks	30	50	-	20
DGT/VSQ/N0102 Employability Skills (60 Hours)	PC.1 Introduction to Employability Skills	1	1	-	-
	PC.2 Constitutional values – Citizenship	1	1	-	-
	PC.3 Becoming a Professional in the 21st Century	2	4	-	-
	PC.4 Basic English Skills	2	3	-	-
	PC.5 Career Development & Goal Setting	1	2	-	-
	PC.6 Communication Skills	2	2	-	-
	PC.7 Diversity & Inclusion	1	2	-	-
	PC.8 Financial and Legal Literacy	2	3	-	-
	PC.9 Essential Digital Skills	3	4	-	-
	PC.10 Entrepreneurship	2	3	-	-
	PC.11 Customer Service	1	2	-	-
	PC.12 Getting Ready for Apprenticeship & Jobs	2	3	-	-
	Total Marks	20	30	-	-
Grand Total		110	180	-	60

Annexure: Assessment Strategy

Assessment Process Overview

Batch Creation & Assessment Request:

Training Providers (TP) or Training Centers (TC), including any other authorized partner of Ministry/ Department create batches / push batches on the SIDH portal. Assessment requests are submitted through the SIDH portal or via email or other media as authorized from time to time. For NON-SIDH schemes, assessment requests

are received electronically or through respective State Skill Mission portals. TP/TC initiates the assessment request through the InSDMS portal and processes the payment (where applicable).

Batch Alignment & Confirmation:

Upon payment confirmation, batches are assigned to the Assessment Agency based on factors like:

- Assessment readiness
- Availability of certified assessors for the specific job role
- Assessment capping to an assessment agency as prescribed from time to time for an AB An email communication / prescribed mode communication is sent to TP/TC for confirmation of the assessment date, with IT-ITeS SSC in the loop. Once confirmation is received, the Assessment Agency designates a TOA-certified assessor to conduct or facilitate the assessment.
- Batches are only formed when the Qualification is active.

Candidate Verification & Assessment Execution:

Candidate details are verified and documented at the beginning of the assessment by a certified assessor. A Quality Assurance (QA) mechanism is enforced, requiring an undertaking from the TC. Regular feedback is collected from TP/TC to ensure continuous improvement.

Evidence Collection & Validation:

Proctors or assessors capture date/time-stamped and geo-tagged photographs of the assessment location during the process. Attendance is also ensured offline. A PC-wise result analysis is conducted to refine assessment standards.

Monitoring & Compliance:

Batch monitoring follows established protocols, ensuring adherence to assessment guidelines. Sample based surprise visits are conducted at TC locations during both training and assessments to verify compliance. This structured approach ensures transparency, quality control, and validation throughout the assessment process.

Testing Environment:

- Check the Assessment location, date and time
- 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.

Assessment Quality Assurance levels/Framework:

IT-ITeS SSC nasscom is responsible for the development and periodic review of the question bank developed for a specific job role. We publish an openly accessible sample /model question paper on our website for all stakeholders. The quality of the Question Bank created by the assessment designer is validated by a Subject matter experts on the following parameters:

- Appropriateness of the Question Bank in terms of facts, data and information.
- Checks for grammar, spellings, scripting and formatting.
- The information provided should be specific enough to remove any ambiguity in answers/solutions to the question.
- Relevance – Assessing the topic well w.r.t. the job role.
- Check if the difficulty level of each question is as per the matrix.
- Check if the images used in the question are clear and relevant.
- All variables, symbols and abbreviations used must be declared.
- The correct answer option should be unique, and the options should not be overlapping

NSQC Approved

Annexure: Acronym and Glossary

Acronym

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

Glossary

Term	Description
National Occupational Standards (NOS)	NOS define 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 based on their main economic function, product, service or technology.