QUALIFICATION FILE

AI- Data Quality 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: Namrata Kapur

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

<table>
<tr><td>1.</td><td>Qualification Name</td><td colspan="2">AI Data Quality Analyst</td></tr>
<tr><td>2.</td><td>Sector/s</td><td colspan="2">IT/ITeS</td></tr>
<tr><td>3.</td><td>Type of Qualification: ☐ New ☒ Revised ☐ Has Electives/Options ☐ OEM</td><td>NQR Code & version of the existing /previous qualification: 2020/ITES/ITSSC/04331 & Version 2</td><td>Qualification Name of the existing/previous version: AI- Data Quality Analyst</td></tr>
<tr><td>4.</td><td>a. OEM Name
b. Qualification Name (Wherever applicable)</td><td colspan="2">
AI- Data Quality Analyst</td></tr>
<tr><td>5.</td><td>National Qualification Register (NQR) Code &Version
(Will be issued after NSQC approval)</td><td>QG-05-IT-01524-2023-V1.1-NASSCOM & Version 3</td><td>6. NCrF/NSQF Level: 5</td></tr>
<tr><td>7.</td><td>Award (Certificate/Diploma/Advance Diploma/ Any Other
(Wherever applicable specify multiple entry/exits also & provide details in annexure)</td><td colspan="2">Certificate</td></tr>
<tr><td>8.</td><td>Brief Description of the Qualification</td><td colspan="2">Individuals at this job are responsible for importing data (public / private, consumer / enterprise) from various internal and external sources. They are responsible for preprocessing the data to meet the desired quality standards or as desired for analysis. They need to have good communication skills to work with stakeholders across multiple teams such as data sciences, product development, etc.</td></tr>
<tr><td>9.</td><td>Eligibility Criteria for Entry for a Student/Trainee/Learner/Employee</td><td colspan="2">a. Entry Qualification & Relevant Experience:
* Relevant Field- AI/Computer Science/IT
The relevant experience would include work, internship and apprenticeship undertaken post completion of relevant educational qualification.
** UG or diploma with courses related to Engg./ Science
<table>
<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 2nd year of 3-year/ 4-year UG**</td><td>-</td></tr>
</table>
</td></tr>
</table>

		2	Completed 3-Year Diploma** after 10th	1 Year of relevant experience*
		3	Previous Relevant qualification of NSQF level 4	3 years of relevant experience*

b. Age: 18 Years (not mandatory)

10.	**Credits Assigned to this Qualification, Subject to Assessment** *(as per National Credit Framework (NCrF))*	16 Credits	**11. Common Cost Norm Category (I/II/III)** *(wherever applicable)***: II**
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 Only ☒ Online Only ☐ Blended**	

Training Delivery Mode	Theory (Hours)	Practical (Hours)	OJT (Mandatory) Hours	OJT (Recommended) Hours	Total (Hours)
Classroom (offline)	144	246	90	-	480
Online	144	246	90	-	480

(Refer Blended Learning Annexure for details)

14.	**Aligned to NCO/ISCO Code/s** *(if no code is available mention the same)*	NCO-2015/252.NIL
15.	**Progression Path After Attaining the Qualification, wherever applicable** *(Please show Professional and Academic progression)*	This entry should refer to one or more of the following: **Professional Progression**: access to related qualification(s) at the next NSQF level – Senior Data Quality Analyst, Senior Business Intelligence Analyst, Senior Visualization Specialist **Academic Progression:** Access to other qualifications at the same NSQF level – Visualization Specialist, Business Intelligence Analyst
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 the 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, SSC/N9014:** Maintain an inclusive, environmentally sustainable workplace	
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: Namrata@nasscom.in** **Contact No.: 0120-4990111** **Website: https://nasscom.in**	
23.	**Final Approval Date by NSQC: 22-Sep-2020**	**24. Validity Duration: 5 Years**	**25. Next Review Date: 22-Sep-2025**

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/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.	Bridge Modules	-	Core	-	02	20:00	40:00	00:00	00:00	60:00	-	-	-	-	-	-
2.	Import data as per specifications	SSC/N8101 V2.0	Core	5	03	40:00	50:00	00:00	00:00	90:00	30	70	-	-	100	35
3.	Preprocess data as per specifications	SSC/N8102 V2.0	Core	5	05	50:00	100:00	00:00	00:00	150:00	30	70	-	-	100	35
4.	Maintain an inclusive, environmentally sustainable workplace	SSC/N9014 V1.0	Non-Core	5	01	10:00	20:00	00:00	00:00	30:00	20	80	-	-	100	10
5.	Employablity 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	20
6.	OJT		-		03	00:00	00:00	90:00	00:00	90:00						
Duration (in Hours) / Total Marks					16	**144:00**	**246:00**	**90:00**	**00:00**	**480:00**	**100**	**250**	**-**	**-**	**350**	**100**

Elective NOS/s:

S. No	NOS/Module Name	NOS/Modul	Core/	NCrF/NS	Credits	Training Duration (Hours)	Assessment Marks

		e Code & Version *(if applicable)*	Non-Core	QF Level	as per NCrF	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.	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 in any discipline, preferably Science/Computer Science/Electronics and Engineering /Information Technology **Industry Experience:** Minimum 2 years of relevant experience in data analysis, data science, big data, or AI

		Training Experience: Minimum 1 year of full-time training experience in data analysis, data science, big data, or AI **Certification:** "Trainer" mapped to the Qualification Pack "MEP/Q2601, V2.0" 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 in any discipline, preferably Science/Computer Science/Electronics and Engineering /Information Technology **Industry Experience:** Minimum 2 years of relevant experience in data analysis, data science, big data, or AI **Training Experience:** Minimum 1 year of full-time training experience in data analysis, data science, big data, or AI **Certification:** " Trainer" mapped to the Qualification Pack "MEP/Q2602, V2.0" 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 in any discipline, preferably Science/Computer Science/Electronics and Engineering /Information Technology **Industry Experience:** Minimum 2 years of relevant experience in data analysis, data science, big data, or AI **Training Experience:** Minimum 1 year of full-time training experience in data analysis, data science, big data, or AI **Certification:** "Assessor" mapped to the Qualification Pack "MEP/Q2701, V2.0" 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 in any discipline, preferably Science/Computer Science/Electronics and Engineering /Information Technology **Industry Experience:** Minimum 2 years of relevant experience in data analysis, data science, big data, or AI

		Training Experience: Minimum 1 year of full-time training experience in data analysis, data science, big data, or AI **Certification:** "Assessor" mapped to the Qualification Pack "MEP/Q2702, V2.0" 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 in any discipline, preferably Science/Computer Science/Electronics and Engineering /Information Technology **Industry Experience:** Minimum 2 years of relevant experience in data analysis, data science, big data, or AI **Training Experience:** Minimum 1 year of full-time training experience in data analysis, data science, big data, or AI **Certification:** "Assessor" mapped to the Qualification Pack "MEP/Q2702, V2.0" Minimum accepted score is 90% aggregate
4.	**Assessment Mode** *(Specify the assessment mode)*	Either Online or in Classroom
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: 15
5.	Estimated number of people to be trained and employed:
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 *(Mandatory)*	Evidence of Level
2.	**Annexure:** List of tools and equipment relevant for NOS *(Mandatory, except in case of online course)*	Tools and Equipment (lab set-up)
3.	**Annexure:** Detailed Assessment criteria *(Mandatory)*	Performance Criteria Details
4.	**Annexure:** Assessment Strategy *(Mandatory)*	Assessment Strategy
5.	**Annexure:** Blended Learning *(Mandatory, in case selected Mode of delivery is Blended Learning)*	To be Developed by Training Partner
6.	**Annexure:** Multiple Entry Exit Details *(Mandatory, in case qualification has multiple entry-exit)*	NA
7.	**Annexure:** Acronym and Glossary *(Optional)*	Acronym and Glossary
8.	**Supporting Document:** Model Curriculum *(Mandatory-Public View)*	MC_SSCQ8101_AI- Data Quality Analyst_V3
9.	**Supporting Document:** Career Progression *(Mandatory-Public View)*	AI BDA Occupational Map
10.	**Supporting Document:** Occupational Map *(Mandatory)*	AI BDA Occupational Map
11.	**Supporting Document:** Assessment SOP *(Mandatory)*	Market research and gap analysis
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

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 broad range of activity involving standard and non-standard practices.** • Identify the objective of the data analysis • Define the type and volume of data to be imported • Define the key variables to be imported and identify suitable sources for the data • Define the format and structure for the dataset • Define indexes and organize variables as per the defined format • Identify data types for each variable of the dataset • Sort the data and create subsets of the data as required	The individual in this role should understand how to perform practice activities that involves standard and non-standard procedures for importing and preprocessing data. He/she needs to identify and fix missing and incorrect data values in the imported dataset and perform operations to validate the data using appropriate tools and processes. The individual therefore requires a fair amount of procedural knowledge with a clear understanding of the guidelines, procedures, rules and service level agreements required to perform their tasks.	5
Professional and Technical Skills/ Expertise/ Professional Knowledge	**A range of cognitive and practical skills required to generate solutions to specific problems in a field of work or study.** • Populate metadata for the imported data • Validate the desired output with the relevant stakeholders within the organization, if required • Sort the data and create subsets of the	The role demands a skillset that allows the individual to evaluate the quality of imported data and employ methods to improve it. He/she must therefore be aware of what the final solution should look like so as improve the quality of data accordingly. The individual therefore requires a range of cognitive and practical skills to perform this role.	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
	data as required • Normalize datasets to identify and deal with data redundancy • Validate preprocessed data by using appropriate tools and processes		
Broad Learning Outcomes/Core Skill	**Reasonably good in mathematical calculation, understanding of social, political and reasonably good in data collection, organizing information, and logical communication.** • Perform operations to acquire the data and store it in datasets or data frames • Validate imported data using appropriate tools & • Processes	The individual should possess in depth knowledge of analytical software tools and use them effectively. Collection and organization of data is a key element of the individual's role and hence, they should have an in-depth understanding of the different functions to import and preprocess data to eliminate anomalies and redundancies. He/she should have a strong understanding of different business and technological trends.	5
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.** • Populate metadata for the imported data • Validate the desired output with the relevant stakeholders within the organization, if required • Sort the data and create subsets of the data as required • Normalize datasets to identify and	The role demands a skillset that allows the individual to evaluate the quality of imported data and employ methods to improve it. He/she must therefore be aware of what the final solution should look like so as improve the quality of data accordingly. The individual therefore requires a range of cognitive and practical skills to perform this role.	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
	deal with data redundancy • Validate preprocessed data by using appropriate tools and processes		
Responsibility	**Responsibility for own work and learning and full responsibility for other's works and learning.** • 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 • Plan and organize your own work to achieve targets and deadlines • Work with colleagues to deliver shared goals	The role demands working in a team to deliver consistent and accurate data quality transformations. 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. The individual working in this role is therefore expected to be responsible for his/her own contribution. In these scenarios the individual might often be required to make decisions or apply balanced judgements to address different situations.	5

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	With Wifi (2MBPS Dedicated)	1 Unit per Trainee
2	Relevant Software	• BI Software: IBM Cognos Impromptu, Oracle Business Intelligence Enterprise Edition • Analytical software tools: IBM SPSS Statistics, SAS, StataCorp Stata, MathWorks	1 Unit per Trainee

Classroom Aids

The aids required to conduct sessions in the classroom are:

1. 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	Organization Name	Representative Name	Designation	Contact Address	Contact Phone No	E-mail ID	LinkedIn Profile (if available)
1	IBM	R Latha	Transformation Leader - Analytics	-	-	rlatha@in.ibm.com	
2	Ideas Software	Abhijit Joshi	Director, Service Delivery	-	-	abhijit.joshi@ideas.com	
3	Samsung	Chandra Sekhar	Head ,L&D	-	-	chandra.sekhar@samsung.com	
4	GE	Ganeshan Rajan	Software Architect	-	-	Ganeshan1.rajan@ge.com	
5	Intentico	Satish Medapati	Founder & CEO	-	-	satish@intentico.ai	

6	Mindtree	Shiva Kumar	Head ,L&D	-	-	Shivakumar.GV@mindtree.com	

Annexure: Training & Employment Details

Training & Employment Projections:

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

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/N8101 Import data as per specifications	PC1. identify the objective of the analysis	5	5	-	-
	PC2. define the type of data to be imported	2	5	-	-
	PC3. define the volume of data to be imported	3	5	-	-
	PC4. define the key variables to be imported	5	10	-	-
	PC5. identify suitable sources for the data	5	10	-	-
	PC6. perform operations to acquire the data and store it in datasets or data frames	5	15	-	-
	PC7. create and populate metadata for the imported data	5	10	-	-
	PC8. validate imported data using appropriate tools & processes	-	5	-	-
	PC9. validate the desired output with the relevant stakeholders within the organization, if	-	5	-	-

NOS/Module Name	Assessment Criteria for Performance Criteria/Learning Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
	required				
	Total Marks	**30**	**70**	**-**	**-**
SSC/N8102 Preprocess data as per specifications	PC1. define the format and structure for the dataset	0	5	-	-
	PC2. define indexes and organize variables as per the defined format	2	3	-	-
	PC3. identify data types for each variable of the dataset	3	7	-	-
	PC4. identify and fix missing values in each variable of the dataset	5	10	-	-
	PC5. identify and fix incorrect data types in each variable of the dataset	5	10	-	-
	PC6. sort the data and create subsets of the data as required	5	10	-	-
	PC7. perform operations to transform data types of variables as required	5	10	-	-
	PC8. identify and deal with data redundancy by normalizing the dataset	5	10	-	-
	PC9. validate preprocessed data using appropriate tools and processes	0	5	-	-
	Total Marks	**30**	**70**	**-**	**-**
SSC/N9014: Maintain an inclusive, environmentally sustainable workplace	PC1. optimize usage of electricity/energy, materials, and water in various asks / activities / processes and plan the implementation of energy efficient systems in a phased manner	5	15	-	-
	PC2. segregate recyclable, non-recyclable and hazardous waste generated for disposal or efficient waste management	5	15	-	-
	PC3. understand the diversity policy of the organization and use internal & external communication to colleagues to improve	5	10	-	-
	PC4. comply with PwD inclusive policies for an adaptable and equitable work environment	-	10	-	-
	PC5. improve through specifically designed recruitment practices, PwD friendly infrastructure, job roles, etc.	-	20	-	-
	PC6. use and advocate for appropriate verbal/nonverbal communication, schemes, and benefits of PwD.	5	10	-	-
	Total Marks	**20**	**80**		
DGT/VSQ/N0102 Employability NOS for 60 Hours	PC1. Introduction to Employability Skills	1	1	-	-
	PC2. Constitutional values – Citizenship	1	1	-	-
	PC3. Becoming a Professional in the 21st Century	2	4	-	-
	PC4. Basic English Skills	2	3	-	-
	PC5. Career Development & Goal Setting	1	2	-	-
	PC6. Communication Skills	2	2	-	-
	PC7. Diversity & Inclusion	1	2	-	-
	PC8. Financial and Legal Literacy	2	3	-	-
	PC9. Essential Digital Skills	3	4	-	-

NOS/Module Name	Assessment Criteria for Performance Criteria/Learning Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
	PC10. Entrepreneurship	2	3	-	-
	PC11. Customer Service	1	2	-	-
	PC12. Getting Ready for Apprenticeship & Jobs	2	3	-	-
	Total Marks	**20**	**30**	**-**	**-**

Annexure: Assessment Strategy

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

Assessment System Overview

A uniform assessment of job candidates as per industry standards facilitates progress of the industry by filtering employable individuals while simultaneously providing candidates with an analysis of personal strengths and weaknesses.

Assessment Criteria

Criteria for assessment for each Qualification File will be created by the Sector Skill Council (SSC). Each Performance Criteria (PC) will be assigned marks proportional to its importance in NOS. SSC will also lay down the proportion of marks for Theory and Skills Practical for each PC.

The assessment for the theory part will be based on a knowledge bank of questions created by the SSC. Assessment will be conducted for all compulsory NOS, and where applicable, on the selected elective/option NOS/set of NOS.

Guidelines for Assessment			
Testing Environment	**Tasks and Functions**	**Productivity**	**Teamwork**

• Carry out assessments under realistic work pressures that are found in the normal industry workplace (or simulated workplace). • Ensure that the range of materials, equipment and tools that learners use are current and of the type routinely found in the normal industry workplace (or simulated workplace) environments.	• Assess that all tasks and functions are completed in a way, and to a timescale, that is acceptable in the normal industry workplace. • Assign workplace (or simulated workplace) responsibilities that enable learners to meet the requirements of the NOS.	• Productivity levels must be checked to ensure that it reflects those that are found in the work situation being replicated.	• Provide situations that allow learners to interact with the range of personnel and contractors found in the normal industry workplace (or simulated workplace).

Assessment Quality Assurance framework

NASSCOM provides two assessment frameworks NAC and NAC-Tech.

NAC (NASSCOM Assessment of Competence)

NAC follows a test matrix to assess Speaking & Listening, Analytical, Quantitative, Writing, and Keyboard skills of candidates appearing for assessment.

NAC-Tech

NAC-Tech test matrix includes assessment of Communication, Reading, Analytical, Logical Reasoning, Work Management, Computer Fundamentals, Operating Systems, RDBMS, SDLC, Algorithms & Programming Fundamentals, and System Architecture skills.

Methods of Validation

To pass a QF, a trainee should score an average of 70% or more. In case of unsuccessful completion, the trainee may seek reassessment on the Qualification File.

Method of assessment documentation and access

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

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.

Annexure: Market Research & Gap Analysis

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?

Using data for analytics provides challenges and opportunities for companies. It isn't just the traditional BI reporting companies that are relying on data obtained from analytics but also companies that focus on innovation and want to understand their customers to make more tailored products and services. However, poor quality of data makes it impossible for

AI to make accurate and informed decisions – ultimately undermining any ROI for an organization. Although companies are looking into this issue, most have not been able to address it effectively. Apart from this, data-driven regulation is expanding quickly.

According to The State of Data Quality in the Enterprise, a study conducted in 2018, many companies struggle with a variety of Data Quality and Data Preparation challenges as they attempt to turn data into valuable business insights. Surveying 290 executives and IT professionals at enterprises with

$100M or more in annual revenue, they observed that companies who have invested in the maturity of their Data Quality report higher levels of satisfaction with the insights generated by their AI models. Despite the clear need for investment, only 15 percent of surveyed businesses have deployed a mature Data Quality model, and just 40 percent have developed one.

Source: http://www.dataversity.net/new-study-reveals-six-trends-current-state-data-quality/

In another survey conducted by AI Business, a portal for businesses working on AI solutions, it was observed that curating and improving data quality was easier said than done, with survey respondents detailing that their inability to access data (44%), a lack of normalization between data sets (43%), and inaccurate data (41%) were their biggest challenges to improving overall quality. More importantly, 36% cited that the lack of internal skills makes it difficult to make sense of data.

Source: https://aibusiness.com/procurement-supply-chain-ai-research/

All this point to a need for analysts who can ensure that the quality of data that is analyzed is top- notch.