QUALIFICATION FILE

AR/VR Test Engineer

☒ 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

Table of Contents

Section 1: Basic Details

1.	**Qualification Name**	**AR/VR Test Engineer**	
2.	**Sector/s**	**IT/ITeS**	
3.	**Type of Qualification: ☐ New ☒ Revised ☐ Has Electives/Options ☐ OEM**	**NQR Code & version of the existing /previous qualification: *QG-07-IT-01546-2023-V1.1-NASSCOM & Version 2***	**Qualification Name of the existing/previous version: ARVR Test Engineer**
4.	**a. OEM name** **b. Qualification Name** *(Wherever applicable)*	***ARVR Test Engineer***	
5.	**National Qualification Register (NQR) Code &Version** (*Will be issued after NSQC approval*)	***QG-07-IT-01546-2025-V2-NASSCOM & Version 3***	**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**	An AR/VR Test Engineer ensures the quality and functionality of augmented reality (AR) and virtual reality (VR) applications and hardware. They design and execute tests, identify and track defects, and collaborate with developers to improve the user experience. This role requires a strong understanding of software testing methodologies, AR/VR technologies, and relevant development tools.	
9.	**Eligibility Criteria for Entry for a Student/Trainee/Learner/Employee**	a. **Entry Qualification & Relevant Experience:** **Relevant Experience in job roles related to ARVR /Computer Science/IT The relevant experience would include work, internship, and apprenticeship after completing relevant educational qualifications. *PG/UG/Degree/Diploma in (Engg./Science)	

S. No.	Academic/Skill Qualification (with Specialization - if applicable)	Required Experience (with Specialization - if applicable)

		1 | Completed 2nd year of 3-year/ 4-year UG* | - 2 | Completed 3-Year Diploma* after 10th | 3 Years of relevant experience** 3 | Previous Relevant qualification of NSQF level 4 | 1.5 years of relevant experience** **b. Age: NA**
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/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 AR/VR Test Engineer
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:**	
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: 07/10/2025**	**24. Validity Duration: 3 Years**	**25. Next Review Date: 07/10/2028**

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 **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.	Define test strategy and test plan for the solution in collaboration with appropriate stakeholders	SSC/N8815, V2.0	Core	5	06	60:00	90:00	30:00	00:00	180:00	30	50	-	20	100	21
2.	Run the simulated test cases, identify automation opportunities and evaluate the outcomes	SSC/N8817, V2.0	Core	5	03	15:00	45:00	30:00	00:00	90:00	30	50	-	20	100	21
3.	Identify, document, and	SSC/N8824, V1.0	Core	5	03	30:00	45:00	15:00	00:00	90:00	30	50	-	20	100	21

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)
	track defects and issues found during testing and communicating them to the development team for resolution.															
4.	Provide support in maintaining and troubleshooting the AR/VR solution.	SSC/N8822, V2.0	Core	5	02	15:00	30:00	15:00	00:00	60:00	30	50	-	20	100	21
5.	Employability Skills (60 Hours)	DGT/VSQ/N0102, V1.0	Non-Core	4	02	24:00	36:00	00:00	00:00	60:00	20	30	-	-	50	16
Duration (in Hours)/Total Marks					16	144:00	246:00	90:00	00:00	480:00	140	230	-	80	450	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.	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)

		Industry & training experience: 2 years of industry experience in AR/VR. The industry experience would include work, internship, and apprenticeships 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 AR/VR. The full-time experience would include work, internship, and apprenticeships 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 AR/VR. 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 AR/VR. 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 AR/VR. 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):
2.	Latest Market Research Reports or any other source (not older than 2 years) (Yes/No):
3.	Government/Industry initiatives/requirement (Yes/No):
4.	Number of industry validations provided:18
5.	Estimated number of people to be trained and employed:
6.	Evidence of Concurrence/Consultation with Line/State Departments: 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)*	NA
6.	**Annexure:** Multiple Entry Exit Details *(Mandatory, in case qualification has multiple entry-exit)*	Acronym and Glossary
7.	**Annexure:** Acronym and Glossary *(Optional)*	Acronym and Glossary
8.	**Supporting Document:** Model Curriculum *(Mandatory-Public View)*	MC_SSCQ8805_ARVR Test Engineer_V3
9.	**Supporting Document:** Career Progression *(Mandatory-Public View)*	ARVR Occupational Map
10.	**Supporting Document:** Occupational Map *(Mandatory)*	ARVR Occupational Map
11.	**Supporting Document:** Assessment SOP *(Mandatory)*	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	• Develop process and standards for test automation framework. • Create or modify test scenarios relevant to the requirements.	The individual in this role must work in a constantly changing environment where he/she needs to develop software while actively engaging with other stakeholders within the company.	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
	• Create or modify integration test cases relevant to the requirements. • Create or modify performance test cases relevant to the requirements. • Create or modify usability and immersive test cases relevant to the requirements. • Create or modify hardware test cases relevant to the requirements. • Create or modify automated scripts relevant to the requirements. • Create a test plan to cover all the requirements. • Run the simulated test cases and evaluate the outcomes	To perform his/her role and collaborate with other stakeholders effectively, the individual must understand the processes used to build software for AR/VR platforms. The individual needs to combine a knowledge of the processes along with a solid understanding of their contexts.	
Professional and Technical Skills/ Expertise/ Professional Knowledge	• Different sources of information available for designing tests and how to access these. • Different types of testing methodologies • Difference between different types of testing such as unit, sub-system, system, automated • Issues that may occur with the testing requirements and how to address these. • The principles of designing tests	The individual in the role must have a vast amount of knowledge across organizational policies, procedures and guidelines which relate to testing various components of the AR/VR solution.	5
Employment Readiness & Entrepreneurship Skills & Mind-set/Professional Skill	• Different simulation tool providers and how to use them.	The role demands a skillset that allows the individual to develop simulations and manage tests for AR/VR solutions. To do so, the individual needs	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
	• Different test automation tools and how to use them. • How to create suitable tests for applications • How to check whether test cases are suitable to be automated • How to create and modify different types of; a. high-level scenarios b. test cases c. automatic scripts d. test data e. test plans • Different simulation methodologies and procedures used to check the tests are working and are fit for purpose. • Scripting / programming of languages to understand test cases	to have prior experience in a related field and the analytical ability to put these skills in practice.	
Broad Learning Outcomes/Core Skill	• Different simulation tools available • Different test automation tools available • Create suitable tests cases for the solution at various stages of product/solution implementation. • Identify test cases that are suitable to be automated. • Different simulation methodologies and procedures used to test AR/VR solution	The individual must apply his/her app development skills and sound understanding of the more significant business, technological and regulatory trends. This would enable him/her to build code across the stack and effectively align with industry best practices.	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
Responsibility	• How to develop your knowledge, skills, and competence • How to build and maintain relationships at the workplace • How to convince others to take appropriate action in different situations • How to collaborate with stakeholders for project success	The role demands working in a team to create and maintain applications. This may involve helping peers with their work from time to time. The individual should collaborate with relevant stakeholders and get their work checked from their supervisor. He/she holds some responsibility for their role.	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	-	
2	Testing Software	Selenium	
3	Programming languages	Python, C ,C++ etc.	
4	Monitoring tools	Prometheus	
5	BI tools	Tableau (Free Public Version)	
6	Documentation tools	Google Docs	
7	Version Control System	Git	
8	Issue/Bug Tracking Software	Asana	
9	AR/VR Development Environments/Engines	Unity (Free Tier)	
10	Performance testing tools	Jmeter	
11	Hardware	• AR/VR Headsets (Microsoft Hololens, Oculus, Magic Leap, Google Glass, Vuzix Blade, HTC Vive) • Smartphones, tablets, and desktops compatible with AR/VR applications	

*Tools are open source

Classroom Aids
The aids required to conduct sessions in the classroom are:

1. White Board
2. White Board Marker
3. Projector
4. Sketch pens & Chart papers

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)
S. No	Organization Name	Representative Name	Designation	Contact Address	Contact Phone No	E-mail ID	LinkedIn Profile (if available)
1	Iamginate	Hemanth Kumar Satyanarayana	CEO of Imaginate XR		9966010133	hemanth@imaginate.in	https://www.linkedin.com/in/hemanths/
2	Acolyte	Saranya Varun	Research Analyst		9944313170	saranyakathir128@gmail.com	-
3	Amazon	Asvin Ragav R	Data Associate		9994308478	asvinragav16@gmail.com	-
4	Data Switch	Thilak hariharaSudhan A	Product Engineer	DataSwitch, Chennai	6393798750	thilakhariharan@gmail.com	https://www.linkedin.com/in/thilak-hariharasudhan-43a89b269/

5	Forbes	Naveenkumar Janakiraman	Senior Associate		9976773109	naveenkumarj4997@gmail.com	https://www.linkedin.com/in/naveenkumar-janakiraman
6	Iamneo	Raj Suriya	Digital Marketer & media specialist	1205/A, 3rd Floor, SPA SRR Towers, Avinashi Rd, Pappanaickenpalayam, Coimbatore, Tamil Nadu 641037	9600953249	rajsurya13@gmail.com	https://in.linkedin.com/in/raj-suriya-896221180
7	Impekable	sreepathi.D	Lead Market Research and Business Development		9655036999	sanjeevsree22@gmail.com	
8	Kornferry	Ragul	Data analyst	-	9659964881	ragulblooper143@gmail.com	https://www.linkedin.com/in/ragul-kumar-b2297a171/
9	Rndsoft	Tamilselvan	Software developer	274/4, Anna Private Industrial Estate Villankurichi, Road, Coimbatore	9361784871	dtamilselvan1004@gmail.com	
10	TCS	Sree Karthikeyan	System Engineer		9626165768	sreekarthikeyan0898@gmail.com	
11	Wipro	Abdul Rahim	Senior Associate		7339471256	Abdul.rahims@wipro.com/	https://in.linkedin.com/in/abdul-rahim-bb428b1a1
12	Draup	MD Mahabub Alam	Software Architect		9731517171	mahabubalam@draup.com	https://in.linkedin.com/in/mdmahabubalam
13	IBM	Arpita Majumder	Tech Consultant	IBM DLF Park 1 New Town Kolkata West Bengal-700156	7894369677	Arpita.majumder@ibm.com	https://www.linkedin.com/in/arpita-majumder-85612a67/
14	Infosys	Vivek Pilaniya	Program Manager	Infosys, delhi	9718423687	vivek.pilania@infosys.com	https://www.linkedin.com/in/vivekpilania-iimc/?originalSubdomain=in
15	Intellibren	Kailash PD	Director,Technology	Intellibren services LLP Unit 101,Oxford	6374700185	kailash@intellibren.com	-

				Towers,139 HAL OLD Airport Rd.Kodihalli Bengaluru-560008			
16	Mindshare	Pamindar Singh	Team Lead		8713901984	paminder.singh@themindshare.in	https://www.linkedin.com/in/paminder-singh-7990b8101/
17	Upgrad	Samneesh Sharma	Sr Manager-project delivery		8679334000	shamneesh.sharma@upgrad.com	https://www.linkedin.com/in/shamneeshsharma1987/

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	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/N8815 Define test strategy and test plan for the solution in collaboration with appropriate stakeholders	PC1. Gather information on the scope of the product by collaborating with other relevant stakeholders.	2	3	-	1
	PC2. Define the objectives of testing the solution.	2	3	-	1
	PC3. Provide support to the concerned team (e.g., strategy) in developing test strategy.	2	3	-	1
	PC4. Outline an overall plan for test automation strategy for device/platform solution	2	3	-	1
	PC5. Prepare a list of functional/non-functional requirements and real-world experiences for testing	2	3	-	1
	PC6. Identify any issues with the requirements for testing and clarify these with appropriate people	2	3	-	1
	PC7. Create the test plan to cover all the requirements and prepare a requirement traceability matrix	2	3	-	1
	PC8. Identify the interactions between various components of the AR/VR solution	1	2	-	1
	PC9. Collaborate with relevant teams (strategy, development, etc.) to develop a set of processes and standards for test automation	1	2	-	1
	PC10. Test the integration of the AR VR product/solution fully into the client's existing SDLC cadence.	1	2	-	1
	PC11.Define tests to measure performance, gameplay, camera tracking, and latency by emulating the real-world environment	1	2	-	1
	PC12. Define tests for preproduction testing with testers that fit the product's target demographic.	1	2	-	1
	PC13. Determine whether the use case selected for AR VR makes sense for the target audience	1	2	-	1
	PC14. Test the product for unwarranted experiences such as motion sickness, lack of immersion, eye strain, etc.	1	2	-	1
	PC15. Determine optimum physical environment attributes for better immersion (e.g., how much open space is needed around an individual using VR)	1	2	-	1
	PC16. Design tests to ensure that the hardware is working properly.	1	2	-	1
	PC17. Test whether the hardware is compatible with the software and other devices used in the simulation	1	2	-	1
	PC18. Develop tests to ensure the network environment supports the solution.	1	2	-	0.5
	PC19. Test the accessories used in the solution and ensure it fits the audience's body correctly	1	2	-	0.5

NOS/Module Name	Assessment Criteria for Performance Criteria/Learning Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
	PC20. Include all possible environment set-ups and user scenarios (e.g., home environment, public spaces, sounds in the background, etc.) while developing the tests/simulations.	1	2	-	0.5
	PC21. Access reusable scenarios, test cases, scripts, and tools from the organization's knowledge base	1	1	-	0.5
	PC22. Access or create test data relevant to the requirements	1	1	-	0.5
	PC23. Validate the test plan, test cases, and/or automated scripts with appropriate people	1	1	-	0.5
	Total Marks	**30**	**50**	**-**	**20**
SSC/N8817: Run the simulated test cases, identify automation opportunities, and evaluate the outcomes	PC1. Ensure the correctness of tests	3	5	-	2
	PC2. Run the simulated test cases and evaluate the outcomes	4	6	-	2
	PC3. Perform test coverage analysis	4	7	-	2
	PC4 Identify test cases that can be automated	4	7	-	3
	PC5. Run automated tests for repeatable controls such as space, lighting, soundproofing, power, temperature, sound, and reconfigurable spaces.	4	7	-	3
	PC6. Create or modify automated scripts checking for safety and correctness using appropriate languages	4	7	-	3
	PC7. Create documentation on the tests and test results, and log defects of failed cases	4	6	-	3
	PC8. Report the outcomes of the tests or simulations with appropriate people	3	5	-	2
	Total Marks	**30**	**50**	**-**	**20**
SSC/N8824: Identify, document, and track defects and issues found during testing, communicating them to the development team for resolution.	PC1. Systematically test the application through various techniques, including functional testing, usability testing, and performance testing. Identify issues such as bugs, glitches, user interface inconsistencies, and performance bottlenecks.	3	4	-	2
	PC2. Employ testing tools and frameworks suitable for AR/VR applications (such as Unity Test Framework or software testing suites) to aid in identifying defects. Automated testing scripts may also be used for regression testing to ensure that previously functioning features remain stable after updates.	3	4	-	2
	PC3. For each identified defect, document detailed information	2	4	-	2
	PC4. Utilize issue tracking tools (such as Jira, Bugzilla, or Trello) to log defects and manage their lifecycle. This allows for organized tracking of reported issues, making it easier for the team to view the status and history of each defect.	2	4	-	2
	PC5. Assign defects to appropriate team members (developers, product managers) based on expertise and responsibility, ensuring accountability for resolution.	2	4	-	2

NOS/Module Name	Assessment Criteria for Performance Criteria/Learning Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
	PC6. Maintain open lines of communication with the development team. Provide regular updates on discovered defects, especially if new critical issues arise during ongoing testing.	2	4	-	2
	PC7. Arrange meetings or forums for testers and developers to discuss defects in more detail, seeking clarifications on the issues identified and potential solutions.	2	4	-	1
	PC8. Be available to assist developers in understanding the context of the defects. A collaborative approach can lead to quicker identification of the root causes and more effective solutions.	2	4	-	1
	PC9. After developers implement fixes, conduct retesting to verify that the issues have been resolved. This includes checking that the defect no longer occurs and that no new issues have been introduced as a result of the changes.	2	3	-	1
	PC10. Perform regression testing to confirm that other functionalities remain unaffected by the fixes, ensuring overall stability and performance of the application.	2	3	-	1
	PC11. Update defect documentation with the status of the defects once resolved, including the solutions implemented. This serves as a historical record that can be useful for future reference.	2	3	-	1
	PC12.Generate reports summarizing testing outcomes, including both identified defects and their resolutions. Include metrics such as defect totals, severity distribution, and trends observed during testing cycles	2	3	-	1
	PC13.Regularly analyze collected defect data to identify recurring issues or trends. This analysis can guide improvements in both testing practices and development processes.	2	3	-	1
	PC14. Encourage feedback from developers and other team members about the defect reporting process to optimize efficiency and clarity in communication.	2	3	-	1
	Total Marks	**30**	**50**	**-**	**20**
SSC/N8822: Provide support in maintaining and troubleshooting the AR/VR solution	PC1. Verify the scope of various components of the AR VR solution	3	5	-	2
	PC2. Determine the type of support required for the solution based on customer ease to connect through chatbot, mails, or call	3	5	-	2
	PC3. Handle pre and post production product support and reporting for the AR/VR solution	3	5	-	2
	PC4 Provide assistance in using the accessories and other components of the AR VR solution	3	5	-	2
	PC5. Resolve issues related to accessories, networks, or software in the solution	3	5	-	2
	PC6. Identify pain points in the solution	3	5	-	2
	PC7. Assess the utility of various features in the solution	3	4	-	2

NOS/Module Name	Assessment Criteria for Performance Criteria/Learning Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
	PC8. Analyze usability patterns and obtain feedback to understand user's interaction with the solution	3	4	-	2
	PC9. Report the observations to relevant teams (development, design, etc.)	2	4	-	2
	PC10. Create/maintain a troubleshooting guide for the AR/VR solution	2	4	-	1
	PC11. Develop documents, training manuals, videos, and other artefacts related to the usage of various features and accessories in the solution	2	4	-	1
	Total Marks	**30**	**50**	**-**	**20**
DGT/VSQ/N0102 Employability Skills (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	-	-
	PC10. Entrepreneurship	2	3	-	-
	PC11. Customer Service	1	2	-	-
	PC12. Getting Ready for Apprenticeship & Jobs	2	3	-	-
	Total Marks	**20**	**30**	**-**	**-**
Grand Total Marks		**140**	**230**	**-**	**80**

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

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.