QUALIFICATION FILE

Mobile Application Development

☒ **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: 4.5

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

1.	**Qualification Name**	**Mobile Application Development**	
2.	**Sector/s**	**IT/ITeS**	
3.	**Type of Qualification:**　☒ **New**　☐ **Revised** ☐ **Has Electives/Options**　☐ **OEM**	**NQR Code & version of the existing /previous qualification:** *(change to previous, once approved)*	**Qualification Name of the existing/previous version: Mobile Application Development**
4.	5.　**OEM Name** 6.　**Qualification Name** *(Wherever applicable)*	**Mobile Application Development**	
7.	**National Qualification Register (NQR) Code &Version** *(Will be issued after NSQC approval)*	**QG-4.5-IT-01806-2024-V1-NASSCOM**	8.　**NCrF/NSQF Level: 4.5**
9.	**Award (Certificate/Diploma/Advance Diploma/ Any Other)** *(Wherever applicable specify multiple entry/exits also & provide details in annexure)*	Certificate	
10.	**Brief Description of the Qualification**	Individuals at this job are responsible for designing and maintaining mobile-based applications, system architecture planning, developing back-end APIs, product testing, fixing of bugs, etc. They may work stand alone or along with application/functional developers as part of the overall solution that includes a mobile-based component. This job may require the personnel to work as an individual contributor or manage a team of junior contributors.	
11.	**Eligibility Criteria for Entry for a Student/Trainee/Learner/Employee**	**Entry Qualification & Relevant Experience:** See table below. **Min Age: 19 Years**	

Entry Qualification & Relevant Experience:

S.No.	Academic/Skill Qualification (with Specialization - if applicable)	Required Experience (with Specialization - if applicable)
1	Completed 1st year of 3-year/ 4-years UG	
2	Pursuing 1st year of 3-year/ 4-years UG and continuing education	
3	Previous relevant Qualification of NSQF Level 4	1.5 Years of relevant experience

12.	**Credits Assigned to this Qualification, Subject to Assessment** *(as per National Credit Framework (NCrF))*	**17 Credits**		**13. Common Cost Norm Category (I/II/III)** *(wherever applicable)*: **II**
14.	**Any Licensing Requirements for Undertaking Training on This Qualification** *(wherever applicable)*	NA		
15.	**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** (see table below) *(Refer Blended Learning Annexure for details)*		
16.	**Aligned to NCO/ISCO Code/s** *(if no code is available mention the same)*	NCO-2015/ NIL		
17.	**Progression Path After Attaining the Qualification, wherever applicable** *(Please show Professional and Academic progression)*	NA		
18.	**Other Indian languages in which the Qualification & Model Curriculum are being submitted**	NA		
19.	**Is similar Qualification(s) available on NQR-if yes, justification for this qualification**	☐ **Yes** ☒ **No** **URLs of similar Qualifications:**		
20.	**Is the Job Amenable to Persons with Disability**	☒ **Yes** ☐ **No** **If "Yes", specify applicable type of Disability:** Visual, Hearing or Speech impairment, Locomotor Disability		
21.	**How will participation of women be encouraged?**	The program is gender neutral although to increase women's participation, organizations are keeping aside a few seats to encourage female candidates.		

Table for item 15:

Training Delivery Mode	Theory (Hours)	Practical (Hours)	OJT (Mandatory) Hours	OJT (Recommended) Hours	Total (Hours)
Classroom (offline)	180:00	330:00	00:00		510:00
Online	180:00	330:00	00:00		510:00

22.	**Are Greening/Environment Sustainability Aspects covered** (*Specify the NOS/Module which Covers it*)	☐ Yes ☒ No	
23.	**Is Qualification suitable to be offered in Schools/Colleges**	Schools: ☐ Yes ☐ No Colleges ☒ Yes ☐ No	
24.	**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**	
25.	**Final Approval Date by NSQC: 6th February 2024**	26. **Validity Duration: 3 Years**	27. **Next Review Date: 06th February 2026**

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.	Work organization and management for Mobile Application Development	SSC/N0801 NOS Version 1	Non-Core	4.5	1	10:00	20:00	00:00	00:00	30:00	20	35	-	-	**55**	8
2.	Business, communication, and interpersonal skills for clients and project fulfilment for Mobile Application Development	SSC/N0802 NOS Version 1	Non-Core	4.5	1	10:00	20:00	00:00	00:00	30:00	10	20	-	-	**30**	7
3.	Sustainable Practice	SSC/N0803 NOS Version 1	Core	4.5	2	20:00	40:00	00:00	00:00	60:00	10	20	-	-	**30**	5

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)
4.	Initial planning, design, and test framework	SSC/N0804 NOS Version 1	Core	4.5	2	20:00	40:00	00:00	00:00	60:00	15	20	-	-	**35**	25
5.	Systems architecture planning	SSC/N0805 NOS Version 1	Core	4.5	3	30:00	60:00	00:00	00:00	90:00	50	100	-	-	**150**	15
6.	Implementation and product development	SSC/N0806 NOS Version 1	Core	4.5	3	30:00	60:00	00:00	00:00	90:00	40	60	-	-	**100**	30
7.	Final product tests, troubleshooting, and optimization	SSC/N0807 NOS Version 1	Core	4.5	5	60:00	90:00	00:00	00:00	150:00	40	60	-	-	**100**	10
Duration (in Hours)/Total Marks					17	180:00	330:00	00:00		510:00	185	315	-	-	**500**	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

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

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

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

Section 3: Training Related

1.	**Trainer's Qualification and experience in the relevant sector (in years)** *(as per NCVET guidelines)*	Post Graduate in Engineering/Technology/ Statistics/ Mathematics/Computer Science/Physical Sciences with Minimum 5 years of relevant experience and 2 years of full-time training experience in programing languages such as HTML, CSS, JavaScript etc.
2.	**Master Trainer's Qualification and experience in the relevant sector (in years)** *(as per NCVET guidelines)*	Post Graduate in Engineering/Technology/ Statistics/ Mathematics/Computer Science/Physical Sciences with Minimum 7 years of relevant experience and 5 years of full-time training experience in relevant field programing languages such as HTML, CSS, JavaScript etc.
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)*	Post Graduate in Engineering/Technology/ Statistics/ Mathematics/Computer Science/Physical Sciences with Minimum 5 years of relevant experience and 2 years of full-time training experience in programing languages such as HTML, CSS, JavaScript etc.
2.	**Proctor's Qualification and experience in relevant sector (in years)** *(as per NCVET guidelines), (wherever applicable)*	Post Graduate in Engineering/Technology/ Statistics/ Mathematics/Computer Science/Physical Sciences with Minimum 7 years of relevant experience and 5 years of full-time training experience in relevant field programing languages such as HTML, CSS, JavaScript etc.
3.	**Lead Assessor's/Proctor's Qualification and experience in relevant sector (in years)** *(as per NCVET guidelines)*	Post Graduate in Engineering/Technology/ Statistics/ Mathematics/Computer Science/Physical Sciences with a Minimum 10 years of relevant experience and 7 years of full-time training experience in programming languages such as HTML, CSS, JavaScript etc.
4.	**Assessment Mode** *(Specify the assessment mode)*	Can be either in the classroom or online
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): NA
4.	Number of industry validations provided: NA
5.	Estimated number of people to be trained and employed: 500
6.	Evidence of Concurrence/Consultation with Line/State Departments: NA 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)*	NA
7.	**Annexure:** Acronym and Glossary *(Optional)*	NA
8.	**Supporting Document:** Model Curriculum *(Mandatory-Public View)*	NA
9.	**Supporting Document:** Career Progression *(Mandatory-Public View)*	NA
10.	**Supporting Document:** Occupational Map *(Mandatory)*	NA
11.	**Supporting Document:** Assessment SOP *(Mandatory)*	Assessment Strategy
12.	**Any Other document you wish to submit:**	NA

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 knowledge	• The individual on the job is responsible for planning and analyzing project requirements, employ design thinking to create flow diagrams, develop within a test-driven framework, choose an appropriate platform, code the application, and continuously test, modify, and optimize for functionality and user experience.	Individuals in this role need expertise in designing mobile architecture, developing applications, and creating back-end APIs. Responsibilities include bug fixing, end-to-end QA, and adherence to health, safety, and environmental standards. They must review and document designs, ensuring compliance with organizational policies in mobile application development.	4.5

Professional and Technical Skills/ Expertise/ Professional Knowledge	• The individual on the job needs to have advanced technical and managerial skills in:
	   o Analyzing the client requirement.
	   o Designing/creating flow diagrams
	   o Creating designs within a test-driven development framework adhering to given parameters
	   o Building the systems architecture, choosing the platform
	   o Selecting the required modules
	   o Writing code for the mobile application
	   o Testing the functionality and optimizing the application for functionality, reliability, and optimization, relative to the user experience
	   o Mathematical aptitude
		This job requires technical skills to contribute to the design of architecture for mobile-based solution and develop mobile applications for different types of mobile platforms.	4.5

Employment Readiness & Entrepreneurship Skills & Mind-set/Professional Skill	• The individual on the job needs to have leadership qualities and effective resource management in:
	   o Professional development
	   o Organizing and maintaining a safe and efficient workspace
	   o Principles and applications of costing, budgeting and charging, relative to market factors
		Individuals at this Job need to have the practical skills required to design and maintain mobile-based applications along with the leadership qualities for professional development, maintaining a safe workspace, and effective resource management. This includes expertise in costing, budgeting, communication skills (speaking, listening, and	4.5

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
	o Speaking, Listening, and Writing skills to communicate with clients, colleagues and others o Maintaining productive working relationships with colleagues, and team members	writing), and fostering productive relationships with clients, colleagues, and team members.	
Broad Learning Outcomes/Core Skill	• The individual on the job needs specialized professional and technical skills involving the design and development of mobile application for various platforms.	Individuals at this job need to have knowledge and skills related to	4.5
Responsibility	• This The individual on the job needs specialized professional and technical skills involving: o Initial planning, designing, and testing framework o Systems architecture planning o Implementation and product development o Final product tests, troubleshooting, and optimization	Individuals at this job are responsible for designing and maintaining mobile-based applications, system architecture planning, developing back-end APIs, product testing, fixing of bugs, etc. They may work stand alone or along with application/functional developers as part of the overall solution that includes a mobile-based component. This job may require the personnel to work as an individual contributor or manage a team of junior contributors. He/she is only responsible for his/her work and may need to be responsible for the work of a team of developers, testers, etc. but also report to a senior team lead. Therefore, this QF is justified to be pegged at Level 6	4.5

Annexure: Tools and Equipment (lab set-up)

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: CRM Tool for demonstration	HTML5, JavaScript, CSS, SQL, Web Builder, Word Press, Joomla, and modelling tools such as Visio, UML.	1 Unit per Trainee
3	Microphone/Voice System	For lecture & class activities	1 Unit for Trainer
4	White Board		1 Unit for Trainer
5	White Board Maker		1 Unit for Trainer
6	Projector		1 Unit

Annexure: Industry Validations Summary

Provide summary information of all the industry validation in table.

S. No	Organisation Name	Representative Name	Designation	Contact Address	Contact Phone No	E-mail ID	LinkedIn Profile (if available)
1							
2							
3							

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
2023-24	500	350	200	140	50	35
2024-25	1000	700	400	280	100	70
2025-26	1500	1050	600	420	150	105

#The Estimated Data is an average for each state.

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
	2022-23	-	-	-	-	-	-	-	-	-

Content availability for the 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	• Books/ e-books • Presentations • Reference Material • Audio / Video Modules	40:60
2	☒Imparting Soft Skills, Life Skills, and Employability Skills /Mentorship to Learners	• Self-Learning Videos • Broadcasts • Mobile Learning • Curated Digital content	40:60
3	☒Showing Practical Demonstrations to the learners	• Video Content • E-Resource library • AR/ VR/ XR	40:60
4	☒Imparting Practical Hands-on Skills/ Lab Work/ workshop/ shop floor training	• Training tools (tools list attached) • Video Play • Presentations	40:60
5	☒Tutorials/ Assignments/ Drill/ Practice	• Online Question Bank • Mobile Quick test app • MCQ based tests	40:60
6	☒Proctored Monitoring/ Assessment/ Evaluation/ Examinations	• Assessment engine for Essays • Up-loadable file examinations • Mock test sessions	40:60
7	☒On the Job Training (OJT)/ Project Work Internship/ Apprenticeship Training	• Online tests • Offline assessments	40:60

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/N0801: Work Organization and Management for Mobile Application Development	PC1. Organize and maintain a safe and efficient workspace	2	4	-	
	PC2. Maintain the integrity and confidentiality of systems, data, information and documents at all times	2	4	-	
	PC3. Acquire, use, maintain, and store all equipment and materials to ensure optimal and sustained performance	3	4	-	
	PC4. Read, appraise and clarify the rights and obligations tied to formal documentation of all kinds	2	4	-	
	PC5. Review opportunities, expectations and offers, relative to personal professional capacity, in order to make open, informed choices	2	4	-	
	PC6. Select, use and keep up to date selected measures for work planning, scheduling and prioritization	2	4	-	
	PC7. Check and ensure that all specific resources are available for the work in hand	2	4	-	
	PC8. Meet or enhance the satisfaction of clients and others through self-knowledge, expectation management, and personal efficiency and effectiveness	3	4	-	
	PC9. Proactively grow personal expertise through research and, professional development	2	3	-	
	Total Marks	**20**	**35**	**-**	
SSC/N0802: Communication and Interpersonal Skills for Mobile Application Development	PC1. Prepare for meetings with clients and associates	1	1	-	
	PC2. Gather, clarify, and confirm client requirements	1	1	-	
	PC3. Receive, clarify, and interpret briefs and specifications	1	1	-	
	PC4. Offer and discuss options and alternatives	1	1	-	
	PC5. Discuss time, costs and fees with client, to reach mutual acceptance	1	1	-	
	PC6. Document and sort out customer needs	1	1	-	
	PC7. Use project management skills and techniques to make the most of workplace organization and resources	1	2	-	
	PC8. Follow instructions from available guidance documentation	0.5	2	-	
	PC9. Record each stage of work development	0.5	2	-	
	PC10. Keep client regularly updated on progress	0.5	2	-	
	PC11. Present proposed and final software solutions	0.5	2	-	
	PC12. Prioritize and schedule tasks	0.5	2	-	

NOS/Module Name	Assessment Criteria for Performance Criteria/Learning Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
	PC13. Allocate resources to tasks	0.5	2	-	
	Total Marks	**10**	**20**	**-**	
SSC/N0803: Sustainable Practice	PC1. Select and use tips for writing efficient code, including optimizing algorithms, avoiding double calculations, using memory and resources reasonably, etc.	2	4	-	
	PC2. Apply the principles of sustainable software design, such as modularity, loose coupling, scalability, reusability and accessibility, so that the software can adapt to future changes in requirements	2	4	-	
	PC3. Apply the methods and tools of software testing and quality control to ensure the quality and stability of the software and reduce the cost of repairing bugs and defects	2	4	-	
	PC4. Use version control systems and collaboration tools so team members can develop and manage code collaboratively to improve work efficiency	2	4	-	
	PC5. Practise continuous integration and delivery, and improve software delivery speed and quality through automated testing and deployment processes	2	4	-	
	Total Marks	**10**	**20**	**-**	
SSC/N0804: Initial Planning, Design, and Test Framework	PC1. Choose the most suitable development platforms	1	2	-	
	PC2. Use UI design software such as Adobe XD, Sketch and Sigma	1	2	-	
	PC3. Conduct prototype and visual design on the application user interface (UI)	1	2	-	
	PC4. Use UI application specifications of iOS or Android systems	2	2	-	
	PC5. Produce user experience (UE) documentation for applications	2	2	-	
	PC6. Produce standardized documentation of applications' brand image, following clients' brand guidelines	2	2	-	
	PC7. Plan and design marketing solutions for mobile applications store	2	2	-	
	PC8. Plan test cases	2	3	-	
	PC9. Design specifications for writing test reports	2	3	-	
	Total Marks	**15**	**20**	**-**	
SSC/N0805: Systems Architecture Planning	PC1. Design the interface based on visual design drafts	5	10	-	
	PC2. Review, select and use open source libraries (such as using Gson OKHttp)	10	10	-	
	PC3. Develop corresponding functions according to the features of different mobile devices	10	20	-	
	PC4. Obtain the mobile terminal device's performance parameters from mobile applications	10	20	-	
	PC5. Implement visualized data statistical analysis and screening in mobile applications	10	20	-	
	PC6. Handle common issues caused by servers, databases, etc	5	20	-	
	Total Marks	**50**	**100**	**-**	

NOS/Module Name	Assessment Criteria for Performance Criteria/Learning Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
SSCN/0806: Implementation and Product Development	PC1. Conduct integrated development with existing code using API (application programming interface)	3	5	-	
	PC2. Realize user interaction effects, animation, and data interaction via programming	3	5	-	
	PC3. Create modular and reusable development codes	3	10	-	
	PC4. Develop Android or iOS interface, and complete compatibility testing	3	20	-	
	PC5. Use Android or iOS development language to implement application development in common design patterns	2	10	-	
	PC6. Use high-performance programming and performance tuning on Android or iOS platform	2	10	-	
	PC7. Apply the test cases, record test results and resolve issues	2	10	-	
	PC8. Plan and implement frequent tests to ensure efficient development	3	10	-	
	PC9. Record test results and resolve issues	3	10	-	
	PC10. Debug the mobile applications to identify issues and write normalized codes to resolve the issues	2	10	-	
	PC11.Complete interface and functional compatibility testing on different platforms and screen resolutions	2	10	-	
	PC12.Simulate testing and troubleshooting of sensors on different devices	3	10	-	
	PC13.Record test results	3	10	-	
	PC14. Implement automated tests of the standardized application programming interfaces	3	10	-	
	PC15. Conduct performance testing and performance tuning (APIs)	3	10	-	
	Total Marks	**40**	**60**	**-**	
SSC/N0807 Final Product Tests, Troubleshooting, and Optimization	PC1. Complete all tests to verify functionality	8	10	-	
	PC2. Bring together all aspects of the project	8	10	-	
	PC3. Analyse and evaluate each stage of the project, relative to • The client's specification • The quality of the user experience	8	10	-	
	PC4. Bring together test results to produce a final report	4	10	-	
	PC5. Evaluate own performance relative to the given brief	4	10	-	
	PC6. Review the completed project in order to ask "how would I move this on?" "How would I take this to the next stage?"	4	5	-	
	PC7. Prepare and present proposals for optimization to line managers and/or clients	4	5	-	
	Total Marks	**40**	**60**	**-**	
Grand Total Marks		**185**	**315**	**-**	

Annexure: Assessment Strategy

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

Assessment System Overview

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

Assessment Criteria

The Sector Skill Council will create criteria for assessment for each Qualification Pack. 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 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).

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 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 about 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

N/A