Please refer Guidelines for STT/LTT/Apprenticeship OEM Qualification file

QUALIFICATION FILE

Product Manager- Web & Mobile

☒ Short Term Training (STT) ☐ Long Term Training (LTT) ☐ Apprenticeship

☒ Upskilling ☐ Dual/Flexi Qualification ☐ For ToT

☐ For ToA

☐General ☐ Multi-skill (MS) ☐ Cross Sectoral (CS) ☒ FutureSkills ☐ OEM

NCrF/NSQF Level: 6

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**	**SSC/Q8401: Product Manager- Web & Mobile**	
2.	**Sector/s**	**IT/ITeS**	
3.	**Type of Qualification: ☐ New ☒ Revised ☐ Has Electives/Options ☐ OEM**	**NQR Code & version of the existing /previous qualification:** *2020/ITES/ITSSC/03794 & Version 1*	**Qualification Name of the existing/previous version:** Product Manager- Web & Mobile
4.	**Qualification Name** *(Wherever applicable)*	Product Manager- Web & Mobile	
5.	**National Qualification Register (NQR) Code &Version** (*Will be issued after NSQC approval*)	QG-05-IT-01533-2023-V1.1-NASSCOM & Version 2	**6. NCrF/NSQF Level:** 6
7.	**Award (Certificate/Diploma/Advance Diploma/ Any Other** *(Wherever applicable specify multiple entry/exits also & provide details in annexure)*	Certificate	
8.	**Brief Description of the Qualification**	Individuals at this job are responsible for owning all stages of development of the Web or Mobile based solution. They must assist in developing use cases and have a strong understanding of business requirements, customers, go-to-market strategy and customer engagement and retention strategies for the Web or Mobile based solution.	
9.	**Eligibility Criteria for Entry for a Student/Trainee/Learner/Employee**	**Entry Qualification & Relevant Experience:** *Relevant Experience in job roles related to Computer Science/IT The relevant experience would include work, internship and apprenticeship after completion of relevant educational qualification. ** PG or UG or diploma with courses related to Engg./ Science Pursuing first year of 2-year PG Program after completing 3-year UG** degree OR Pursuing 1-year PG diploma after 3-year UG** degree OR Completed 4th year UG (in case of 4-year UG**with honours/ honours with research)	

<table>
<tr><td></td><td></td><td colspan="2">OR
Pursuing 4th year UG (in case of 4-year UG**with honours/ honours with research) and continuing education
OR
Completed 3-Year UG** Degree with 1 year of relevant experience*
OR
Previous Relevant qualification of NSQF level 5 with 3 years of relevant experience*
Min Age: 21 Years (not mandatory)</td></tr>
<tr><td>10.</td><td>Credits Assigned to this Qualification, Subject to Assessment (as per National Credit Framework (NCrF))</td><td>19 Credits</td><td>11. Common Cost Norm Category (I/II/III) (wherever applicable): II</td></tr>
<tr><td>12.</td><td>Any Licensing Requirements for Undertaking Training on This Qualification (wherever applicable)</td><td colspan="2">NA</td></tr>
<tr><td>13.</td><td>Training Duration by Modes of Training Delivery (Specify Total Duration as per selected training delivery modes and as per requirement of the qualification)</td><td colspan="2">☒ Offline Only ☒ Online Only ☐ Blended

<table><tr><th>Training Delivery Mode</th><th>Theory (Hours)</th><th>Practical (Hours)</th><th>OJT (Mandatory) Hours</th><th>OJT (Recommended) Hours</th><th>Total (Hours)</th></tr><tr><td>Classroom (offline)</td><td>164</td><td>286</td><td>120</td><td>-</td><td>570</td></tr><tr><td>Online</td><td>164</td><td>286</td><td>120</td><td>-</td><td>570</td></tr></table>
(Refer Blended Learning Annexure for details)</td></tr>
<tr><td>14.</td><td>Assessment Criteria</td><td colspan="2"><table><tr><th>Theory (Marks)</th><th>Practical (Marks)</th><th>Project (Marks)</th><th>Viva (Marks)</th><th>Total (Marks)</th><th>Passing %age</th></tr><tr><td>272</td><td>678</td><td>-</td><td>-</td><td>950</td><td>70%</td></tr></table></td></tr>
<tr><td>15.</td><td>Aligned to NCO/ISCO Code/s (if no code is available mention the same)</td><td colspan="2">NCO- 2015/NIL</td></tr>
<tr><td>16.</td><td>Progression Path After Attaining the Qualification, wherever applicable</td><td colspan="2">This entry should refer to one or more of the following:
Academic progression: access to related qualification(s) at the same NSQF level: Senior User</td></tr>
</table>

	(Please show Professional and Academic progression)	Experience Designer, Application Architect – Web & Mobile, Senior Application Developer Web & Mobile, Senior Test Analyst – Web & Mobile, Senior DevOps Analyst – Web & Mobile **Professional progression**: access to related qualification(s) at the next NSQF level: Senior Product Manager – Web & Mobile, Lead User Experience Designer, Senior Application Architect – Web & Mobile, Lead Application Developer – Web & Mobile, Lead Test Analyst – Web & Mobile, Lead DevOps Analyst – Web & Mobile	
17.	**Other Indian languages in which the Qualification & Model Curriculum are being submitted**	Hindi	
18.	**Is similar Qualification(s) available on NQR-if yes, justification for this qualification**	☐ **Yes** ☒ **No** **URLs of similar Qualifications:**	
19.	**Is the Job Amenable to Persons with Disability**	☒ **Yes** ☐ **No** **If "Yes", specify applicable type of Disability:** Visual, Hearing or Speech impairment, Locomotor Disability	
20.	**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.	
21.	**Are Greening/Environment Sustainability Aspects covered** (*Specify the NOS/Module which Covers it)*	☒ **Yes** ☐ **No** NOS: SSC/N9014: Maintain an inclusive, environmentally sustainable workplace	
22.	**Is Qualification suitable to be offered in Schools/Colleges**	**Schools:** ☐ **Yes** ☒ **No** **Colleges** ☒ **Yes** ☐ **No**	
23.	**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**	
24.	**Final Approval Date by NSQC:** 25 June 2020	**25. Validity Duration:** 5 Years	**26. Next Review Date:** 16 Dec 2024

Section 2: Module Summary

NOS/s of Qualification

(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 Code & Version (If Applicable)	Core/ Non-Core	Credits as per NcRF	Module Name	Training Duration (Hours)					Assessment Marks					
					Th.	Pr.	OJT-Man.	OJT-Rec.	Total	Th.	Pr.	Proj.	Viva	Total	Weightage (%) (if applicable)
1.	Bridge Modules	Core	01	Module 1: IT-ITeS/BPM Industry – An Introduction	07:00	03:00	00:00	00:00	10:00	-	-	-	-	-	-
				Module 2: Web technology – An Introduction	02:50	02:50	00:00	00:00	05:00						
				Module 3: Mobile Development – An Introduction	02:50	02:50	00:00	00:00	05:00						
				Module 4: Global Standards and Regulations	04:00	01:00	00:00	00:00	5:00						
				Module 5: Principles of strategy	04:00	01:00	00:00	00:00	5:00						
2.	SSC/N8401: Define a strategy for the software product/solution NOS Version No. 1 NSQF Level 6	Core	02	Module 6: Product development strategy	20:00	40:00	00:00	00:00	60:00	30	70	-	-	100	12
3.	SSC/N8127 – Collect and define business requirements by interacting with clients NOS Version No. 2	Core	01	Module 7: Business Requirements Analysis	10:00	20:00	00:00	00:00	30:00	25	75	-	-	100	07

S.No.	NOS/Module Code & Version (If Applicable)	Core/ Non-Core	Credits as per NcRF	Module Name	Training Duration (Hours)					Assessment Marks					
					Th.	Pr.	OJT-Man.	OJT-Rec.	Total	Th.	Pr.	Proj.	Viva	Total	Weightage (%) (if applicable)
	NSQF Level 6														
4.	SSC/N8402 – Finalize the MVP (Minimum Viable Product) based on the defined business requirements NOS Version No. 1 NSQF Level 6	Core	03	Module 8: MVP (Minimum Viable Product) Development	30:00	60:00	00:00	00:00	90:00	31	69	-	-	100	12
5.	SSC/N8403 – Define KPIs to measure and monitor the software product/solution for performance, adoption, usability and conversion NOS Version No. 1 NSQF Level 6	Core	01	Module 9: Monitoring software performance	10:00	20:00	00:00	00:00	30:00	30	70	-	-	100	12
6.	SSC/N8404 – Define a go-to-market strategy for the product/solution NOS Version No. 1 NSQF Level 6	Core	01	Module 10: Go-to-market strategy	10:00	20:00	00:00	00:00	30:00	31	69	-	-	100	12
7.	SSC/N8405 – Customer Engagement and Retention Strategy NOS Version No. 1 NSQF Level 6	Core	01	Module 11: Customer Engagement and Retention Strategy	10:00	20:00	00:00	00:00	30:00	29	71	-	-	100	12
8.	SSC/N8406 – Create and execute a project charter and monitor the project KPIs	Core	01	Module 12: Project Charter	10:00	20:00	00:00	00:00	30:00	27	73	-	-	100	12

S.No.	NOS/Module Code & Version (If Applicable)	Core/ Non-Core	Credits as per NcRF	Module Name	Training Duration (Hours)					Assessment Marks					
					Th.	Pr.	OJT-Man.	OJT-Rec.	Total	Th.	Pr.	Proj.	Viva	Total	Weightage (%) (if applicable)
	NOS Version No. 1 NSQF Level 6														
9.	SSC/N9011 – Manage team performance to achieve project goals NOS Version No. 2 NSQF Level 6	Non-Core	01	Module 13: Project Management	10:00	20:00	00:00	00:00	30:00	29	71	-	-	100	7
10.	SSC/N9014 Maintain an inclusive, environmentally sustainable workplace NOS Version No. 1 NSQF Level 5	Non-Core	01	Module 14: Inclusive and environmentally sustainable workplaces	10:00	20:00	00:00	00:00	30:00	20	80	-	-	100	7
11.	DGT/VSQ/N0102 Employability Skills NOS Version No. 1 NSQF Level 4	Non-Core	02	Module 15: Introduction to Employability Skills	00:30	01:00	00:00	00:00	01:30	20	30	-	-	50	7
				Module 16: Constitutional values - Citizenship	00:30	01:00	00:00	00:00	01:30						
				Module 17: Becoming a Professional in the 21st Century	01:00	01:30	00:00	00:00	02:30						
				Module 18: Basic English Skills	04:00	06:00	00:00	00:00	10:00						
				Module 19: Career Development & Goal Setting	01:00	01:00	00:00	00:00	02:00						
				Module 20: Communication Skills	02:00	03:00	00:00	00:00	05:00						
				Module 21: Diversity & Inclusion	01:00	01:30	00:00	00:00	02:30						
				Module 22: Financial and Legal Literacy	02:00	03:00	00:00	00:00	05:00						

S.No.	NOS/Module Code & Version (If Applicable)	Core/ Non-Core	Credits as per NcRF	Module Name	Training Duration (Hours)					Assessment Marks					
					Th.	Pr.	OJT-Man.	OJT-Rec.	Total	Th.	Pr.	Proj.	Viva	Total	Weightage (%) (if applicable)
				Module 23: Essential Digital Skills	04:00	06:00	00:00	00:00	10:00						
				Module 24: Entrepreneurship	03:00	04:00	00:00	00:00	07:00						
				Module 25: Customer Service	02:00	03:00	00:00	00:00	05:00						
				Module 26: Getting ready for apprenticeship & Jobs	03:00	05:00	00:00	00:00	08:00						
12.	OJT	Core	04	OJT	00:00	00:00	120:00	00:00	120:00	-	-	-	-	-	-
Grand Total			**19**		**164:00**	**286:00**	**120:00**	**00:00**	**570:00**	**272**	**678**	**-**	**-**	**950**	**100**

Assessment - Minimum Qualifying Percentage
Minimum Pass Percentage – Aggregate at qualification level: 70 % (Every Trainee should score a 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/ Statistics/ Mathematics/ Computer Science) **Industry Experience:** 5 years of full-time experience in Product Manager or related roles. The full-time experience would include work, internship and apprenticeship undertaken post completion of regular graduation

		Training Experience: 2 year of full-time training experience preferred in Software Analyst or related roles **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 (Engineering/ Technology/ Statistics/ Mathematics/ Computer Science) **Industry Experience:** 5 years of full-time experience in Product Manager or related roles. The full-time experience would include work, internship and apprenticeship undertaken post completion of regular graduation **Training Experience:** 2 year of full-time training experience preferred in Software Analyst or related roles **Certification:** "Trainer" mapped to the Qualification Pack "MEP/Q2602, V2.0" Minimum accepted score is 80% 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/ Statistics/ Mathematics/ Computer Science) **Industry Experience:** 5 years of full-time experience in Product Manager or related roles. The full-time experience would include work, internship and apprenticeship undertaken post completion of regular graduation **Training Experience:** 2 year of full-time training experience preferred in Software Analyst or related roles **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*	**Educational Qualification:** Graduate (Engineering/ Technology/ Statistics/ Mathematics/ Computer Science) **Industry Experience:** 5 years of full-time experience in Product Manager or related roles. The full-time experience would

	applicable)	include work, internship and apprenticeship undertaken post completion of regular graduation **Training Experience:** 2 year of full-time training experience preferred in Software Analyst or related roles **Certification:** ""Assessor" mapped to the Qualification Pack "MEP/Q2701, V2.0" Minimum accepted score is 90% aggregate
3.	**Lead Assessor's/Proctor's Qualification and experience in relevant sector (in years)** *(as per NCVET guidelines)*	**Educational Qualification:** Graduate (Engineering/ Technology/ Statistics/ Mathematics/ Computer Science) **Industry Experience:** 5 years of full-time experience in Product Manager or related roles. The full-time experience would include work, internship and apprenticeship undertaken post completion of regular graduation **Training Experience:** 2 year of full-time training experience preferred in Software Analyst or related roles **Certification:** ""Assessor" mapped to the Qualification Pack "MEP/Q2702, V2.0" Minimum accepted score is 80% aggregate
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): NA
2.	Latest Market Research Reports or any other source (not older than 2 years) (Yes/No): NA
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: NA
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)*	MC_SSC/Q8401_Product Manager- Web & Mobile_v2.0
9.	**Supporting Document:** Career Progression *(Mandatory-Public View)*	NA
10.	**Supporting Document:** Occupational Map *(Mandatory)*	IT-ITeS Occupation Map
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
Process	**A command of wide-ranging specialised theoretical and practical skills, involving variable routine and nonroutine contexts.** • Document business requirements of the client and the major functionalities and specifications of the software product • Prepare competitive analysis of other software products to understand the requirements of the market • Processes involved in development of software products for web and mobile platforms • Processes to manage the development of different software features • Gather requirements for development of a go-to-market strategy • Develop a customer engagement plan to ensure consistent usage of the software product.	The individual in this role must work in a constantly changing environment where he/she needs to develop software products while actively engage with other stakeholders within the company. To perform his/her role and to collaborate with other stakeholders effectively, the individual requires a vast understanding of the processes used to build software products for web and mobile platforms. The individual needs to combine a knowledge of the processes along with a solid understanding of their contexts.	6
Professional knowledge	**Wide-ranging factual and theoretical knowledge in broad contexts within a field of work or study.** • Knowledge of different types of web and mobile development technologies • Knowledge of different types of software products for different target platforms • Knowledge of different types of technology stacks for different types of software products • How to conduct competitive analysis of software products	The individual in the role must have a vast amount of knowledge across the different aspects of software development on various web and mobile platforms. This knowledge across various disciplines must be accompanied with an in-depth understanding of each discipline to perform this role effectively.	6

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
	• How to develop minimum viable products • How to define a go-to market strategy • How to define a customer engagement strategy		
Professional skill	**Wide range of cognitive and practical skills required to generate solutions to specific problems in a field of work of study.** • Knowledge of different processes for software development • Knowledge of how to identify type of software product to be developed for different channels • Knowledge of how to define services (such as database transactions, messaging etc.) and to be developed as part of the software product • How to software products that have a high level of customer engagement How to ensure the software product fits into the requirements of the market appropriately	The role demands a skillset that allows the individual to build software products. This requires a wide range of skills. The individual therefore needs to be proficient at using several tools must have the analytical ability to use them effectively.	6
Core skill	**Good logical and mathematical skill understanding of social political and natural environment and organising information, communication and presentation skill.** • How to define business requirements by interacting with the clients • How to strategize for developing software products for different channels • How to plan for developing a minimum viable product before the planning to develop the actual product • How to develop a business plan to enter the market • How to ensure engagement of the customer with the software product • How to ensure timely development of software products	The individual must apply his/her product management skills along with a sound understanding of the larger business, technological and regulatory trends. This would enable him/her to build products effectively in line with industry best practices.	6

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	**Full responsibility for output of group and development** • 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 manage and 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 and providing feedback and advice to help improve the quality of their work. Since this role is likely to have people reporting to it, the individual performing this role is supposed to take responsibility for the output and the development of the entire team.	6

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: Data Entry Tools/ software	• Product Management tools: Productboard, Prodpad, Balsamiq Mockups • ssWorkflow management tools: Evernote, Jira, VersionOne, Workzone, Scrum Mate etc.	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	Organization	Name of Representative	Designation	Email Id	Contact number
1	Mo engage	Chaitanya	-	chai.chaudhari@gmail.com	-
2	Flipkart	Goutam	-	goutam.prabhu@flipkart.com	-
3	Revos	Ishaan	-	shaan.bansal.29@gmail.com	--
4	Mindtree	Jayantha	-	Jayantharaja.Patla@mindtree.com	-
5	Merilytics	Mayank	-	kmayank9291@gmail.com	-
6	Cognizant	Parag	-	Parag.Desai@cognizant.com	-
7	Cloud Strats	Pooja Gupta	-	pooja.gupta@cloudstrats.com	-
8	Microsoft	Pruthivi P	-	pruthvip@microsoft.com	-
9	Delivery Hero	Prabhjot Kaur	-	prabhjot.kaur@deliveryhero.com	-
10	Turai.ai	Rahul Bhojwani	-	rahul@turia.ai	-
11	WIPRO	Rajesh	-	rajesh.naircp@wipro.com	-
12	IBM	Sachin	-	sachinnayak@in.ibm.com	-
13	UPgrad	Sandeep Thilakan	-	sandeep.thilakan@upgrad.com	-
14	BYju	Vergese mathew	-	varghese.mathew@byjus.com	-
15	Intel	Vinay Sharma	-	vinay2.sharma@intel.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
2023-24	-	-	-	-	-	-
2024-25	-	-	-	-	-	-

2025-26	-	-	-	-	-	-

#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: 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
1. SSC/N8401: Define a strategy for the software product/solution	PC1. analyze the customer experience journey to understand the end-to-end interaction of the customer	2	4	-	-
	PC2. research the competitive landscape, products and offerings	2	4	-	-
	PC3. define solutions with cross-functional teams to address the needs of the customer	2	6	-	-
	PC4. describe a product differentiation & market positioning strategy	2	4	-	-
	PC5. decide the target platforms, regions and languages for the application/solution	2	4	-	-
	PC6. determine the type of application/solution to be developed (such as web application, native application, hybrid application, cross-platform application etc.)	2	6	-	-
	PC7. define a development roadmap for the application/solution	2	6	-	-
	PC8. delineate resources and budget required for development of the mobile application/solution	2	4	-	-

NOS/Module Name	Assessment Criteria for Performance Criteria/Learning Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
	PC9. assess the need for a/b testing of the product/features	2	4	-	-
	PC10. conduct impact analysis of new products and features to be launched in the market	2	4	-	-
	PC11. leverage existing competencies of the team and build new competencies to develop the desired solutions	2	4	-	-
	PC12. formulate the app-store strategy for the application/solution	2	4	-	-
	PC13. elucidate ways to generate revenue/ realize business value from the proposed solution	2	4	-	-
	PC14. test the feasibility of the proposed application/solution	2	6		
	PC15. communicate the conceptualized solution with relevant stakeholders and other cross-functional teams	2	6	-	-
	Total Marks	**30**	**70**	**-**	**-**
2. SSC/N8127: Collect and define business requirements by interacting with clients	PC1. assess the current business of the client	5	10	-	-
	PC2. understand technical capabilities of the client	5	10	-	-
	PC3. conduct business contextual discussions with the client	5	15	-	-
	PC4. evaluate and define the requirements of the client	5	15	-	-
	PC5. map the requirements to the capabilities of the team or organization responsible for delivering on them	5	15	-	-
	PC6. create documentation on the requirements	0	5	-	-
	PC7. validate requirements with appropriate stakeholders, both internal and external to the organization	0	5	-	-
	Total Marks	**25**	**75**	**-**	**-**
3. SSC/N8402: Finalize the MVP (Minimum Viable Product) based on the defined business requirements	PC1. conduct research and surveys to identify the major problems faced by the customers	3	6	-	-
	PC2. specify ways to solve problems faced by the customer	2	5	-	-
	PC3. gather feedback from customers on the proposed ways to solve the problem	3	7	-	-
	PC4. describe the design process and user flow to develop the MVP	4	8	-	-
	PC5. identify all the essential features to be included in the MVP	3	7	-	-
	PC6. develop a project plan outlining responsibilities and major milestones to be achieved for developing the MVP	3	7	-	-
	PC7. define the budget and resources required to develop the MVP	4	8	-	-
	PC8. collaborate with cross-functional teams to develop the MVP	3	7	-	-
	PC9. release the MVP among early users to gather early feedback on the product	3	7	-	-
	PC10. ensure feedback from early users is implemented into the MVP	3	7	-	-
	Total Marks	**31**	**69**	**-**	**-**
4. SSC/N8403:	PC1. establish the business goals to be achieved from the product/solution	7	15	-	-

NOS/Module Name	Assessment Criteria for Performance Criteria/Learning Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Define KPIs to measure and monitor the software product/solution for performance, adoption, usability and conversion	PC2. gather and define KPIs to monitor performance of the product/solution	8	20	-	-
	PC3. create a structure for reporting product usage and performance data to relevant stakeholders	7	15	-	-
	PC4. share regular reports on product usage and performance with relevant stakeholders	3	8	-	-
	PC5. develop a feedback loop to continuously collect, implement and report feedback on product performance, adoption, usability and conversion	5	12	-	-
	Total Marks	**30**	**70**	**-**	**-**
5. SSC/N8404: Define a go-to-market strategy for the product/solution	PC1. identify and assess other competitors and providers of similar products/solution in the market	3	7	-	-
	PC2. determine new opportunities by highlighting specific areas in the market that are upcoming or underserved	2	4	-	-
	PC3. find the demand for similar product/solution in the market	3	7	-	-
	PC4. leverage analytics to analyze customer data to identify buying trends in for similar products/services	4	9	-	-
	PC5. describe a suitable solution/product offering for the customer	5	11	-	-
	PC6. define the margins for profit	5	11	-	-
	PC7. create and implement plans to identify potential customers	5	11	-	-
	PC8. use benchmarks and KPIs to create forecasts for future opportunities in the market	4	9	-	-
	Total Marks	**31**	**69**	**-**	**-**
6. SSC/N8405: Define a customer engagement and retention strategy	PC1. define customer engagement goals and objectives	2	6	-	-
	PC2. identify customer segment and experiment different versions of the product/solution to determine the optimum solution	2	6	-	-
	PC3. describe a strategy for smoother customer on-boarding and user training to increase customer engagement	3	7	-	-
	PC4. develop a strategy to evangelize and promote usage of products/solutions among the customers	3	7	-	-
	PC5. create a customer maturity model to understand customer engagement pattern and measure life-time value of the customer	2	6	-	-
	PC6. formalize an account tracking strategy to measure growth patterns in key customer account	3	7	-	-
	PC7. evaluate customer support services for satisfactory customer engagement	2	4	-	-
	PC8. specify metrics and KPIs to measure satisfactory customer engagement	2	6	-	-
	PC9. communicate regularly with clients to maintain customer engagement	2	4	-	-
	PC10. monitor and execute operations around customer engagement and retention	2	4	-	-
	PC11. leverage analytics to obtain actionable insights from customer engagement data	2	6	-	-
	PC12. conduct regular surveys and gather feedback from customers on the products and services that	2	4	-	-

NOS/Module Name	Assessment Criteria for Performance Criteria/Learning Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
	they are using				
	PC13. Provide feedback to engineering team to improve product features and solutions for better customer engagement and experience	2	4	-	-
	Total Marks	**29**	**71**	**-**	**-**
7. SSC/N8406: Create and execute a project charter and monitor the project KPIs	PC1. establish the objectives to be achieved at the end of the project	2	6	-	-
	PC2. detail the scope of the project in terms of project goals and deliverables	2	4	-	-
	PC3. identify the relevant stakeholders of the project, both internal and external to the organization	2	4	-	-
	PC4. designate key roles and responsibilities involved in delivering the project	1	3	-	-
	PC5. map the requirements to the capabilities of the team or organization responsible for delivering them	2	4	-	-
	PC6. create a project organization chart to define a reporting structure for a successful implementation of product/solution	2	6	-	-
	PC7. elucidate an overall project governance strategy	3	7	-	-
	PC8. Specify the milestones to be achieved as part of the project	2	6	-	-
	PC9. list key dependencies and their criticality to the project	2	6	-	-
	PC10. create a plan for resources required to undertake the project	2	6	-	-
	PC11. describe the project development methodology (such as agile, waterfall etc.) for the product/solution	2	6	-	-
	PC12. ascertain the risks and constraints associated with the project and draw mitigations against each of them	2	6	-	-
	PC13. define KPIs/ metrics for monitoring and measuring the implementation of the plan	2	6	-	-
	PC14. validate the project plan with relevant stakeholders before implementation	1	3	-	-
	Total Marks	**27**	**73**	**-**	**-**
8. SSC/N9011: Manage team performance to achieve project goals	PC1. create realistic schedules for projects and direct your efforts in implementing it as per the plan	3	7	-	-
	PC2. identify the sequence of tasks and the resources needed to achieve a goal, and prioritize key action steps	1	4	-	-
	PC3. ensure evaluation processes are in place to measure project benefits	1	4	-	-
	PC4. constantly monitor the progress and delivery of the project	2	3	-	-
	PC5. plan your own work to meet the deadlines	2	3	-	-
	PC6. prioritize work in line with key team or project deliverables	1	4	-	-
	PC7. identify and consult the stakeholders in planning work	3	7	-	-
	PC8. inform relevant stakeholders in case of inability to meet the deadlines	3	7	-	-
	PC9. use appropriate project management tools and give access to relevant stakeholders	1	4	-	-
	PC10. regularly update/communicate the team and stakeholder about the project progress	2	3	-	-

NOS/Module Name	Assessment Criteria for Performance Criteria/Learning Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
	PC11. efficiently allocate resources to meet needs of the project or the organization	2	3	-	-
	PC12. optimize the use of resources to provide for unforeseen changes in priorities, schedules and client expectations	1	4	-	-
	PC13. check for errors in work in order and ensure delivery of high quality of work	1	4	-	-
	PC14. use quality assurance processes across the team as a feedback mechanism to improve performance	2	3	-	-
	PC15. ensure that all the team members/ new employees in the project are trained on relevant modules of the project	2	3	-	-
	PC16. create training or reference documents so that the team can refer when in need	1	4	-	-
	PC17. organise training sessions regularly and when necessary on-board a subject matter expert to help train the team as per the requirement	1	4	-	-
	Total Marks	**29**	**71**	**-**	**-**
6. 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**	**-**	**-**
7. DGT/VSQ/ N0102 Employability Skills (60 Hrs)	Introduction to Employability Skills	1	1	-	-
	Constitutional values – Citizenship	1	1	-	-
	Becoming a Professional in the 21st Century	2	4	-	-
	Basic English Skills	2	3	-	-
	Career Development & Goal Setting	1	2	-	-
	Communication Skills	2	2	-	-
	Diversity & Inclusion	1	2	-	-
	Financial and Legal Literacy	2	3		
	Essential Digital Skills	3	4		
	Entrepreneurship	2	3		
	Customer Service	1	2		

NOS/Module Name	Assessment Criteria for Performance Criteria/Learning Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
	Getting Ready for Apprenticeship & Jobs	2	3		
	Total Marks	**20**	**30**	**-**	**-**
Grand Total Marks		**272**	**678**	**-**	**-**

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

The number of users of mobile applications in India has been increasing. India was the number one market globally by combined downloads on iOS and Google Play, ahead of the United States (2nd), and China (3rd, iOS only).

https://economictimes.indiatimes.com/articleshow/63740547.cms?utm_source=contentofinterest&utm_medium=text&utm_campaign=cppst

Rapid spread of cheap mobile broadband services (4G/4G LTE) is fuelling this growth. The average data usage per subscriber grew 25 times from 62 MB per month in 2014 to 1.6 GB per month in 2017. It is estimated that India's mobile data consumption is going to skyrocket from 3.5 gigabytes (GB) in 2017 to 17.5 GB in 2022.

https://qz.com/india/1483368/indias-smartphone-internet-usage-will-surge-by-2022-cisco-says/

Also, the number of smartphone users in India is expected to rise by 84% to 859 million by 2022 from 468 million in 2017.

https://economictimes.indiatimes.com/articleshow/69260487.cms?from=mdr&utm_source=contentofinterest&utm_medium=text&utm_campaign=cppst