

QUALIFICATION FILE – Standalone NOS

Fundamentals of AI and IoT in Customer Engagement (Omnichannel Retail)

☒ Horizontal/Generic ☐ Vertical/Specialization

☒ Upskilling ☐ Dual/Flexi Qualification ☒ For ToT ☒ For ToA

☐ General ☐ Multi-skill (MS) ☐ Cross Sectoral (CS) ☒ Future Skills

NCrF/NSQF Level: 4.5

Submitted By:

Retailers Association's Skill Council of India

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Section 1: Basic Details

1.	NOS-Qualification Name	Fundamentals of AI and IoT in Customer Engagement (Omnichannel Retail)	
2.	Sector/s	Retail	
3.	Type of Qualification ☒ New ☐ Revised	NQR Code & version of the existing /previous qualification: <i>(change to previous, once approved)</i>	Qualification Name of the existing/previous version: <i>(previous, once approved)</i>
4.	National Qualification Register (NQR) Code & Version <i>(Will be issued after NSQC approval.)</i>	NG-4.5-OR-04255-2025-V1-RASCI	5. NCrF/NSQF Level: 4.5
6.	Brief Description of the Standalone NOS	This National Occupational Standard (NOS) outlines the competencies required for professionals in retail who aim to excel in omnichannel strategies for customer experience management, leveraging advanced technologies such as AI and IoT. Its objective is to equip retail managers and executives with the skills to design, implement, and evaluate integrated marketing strategies that enhance customer engagement and satisfaction across multiple channels. This NOS is intended for retail professionals looking to future-proof their operations and drive innovation in a rapidly evolving market.	
7.	Eligibility Criteria for Entry for a Student/Trainee/Learner/Employee	a. Entry Qualification & Relevant Experience:	

		b. Age <Please specify age only in case of any legal restrictions>:																				
		<table border="1"> <thead> <tr> <th>S. No.</th><th>Academic/Skill Qualification (with Specialization - if applicable)</th><th>Relevant Experience (with Specialization - if applicable)</th></tr> </thead> <tbody> <tr> <td>1</td><td>Completed or pursuing 1st year of 3 year/ 4 year UG or equivalent with basic digital literacy skills.</td><td>No Experience Required</td></tr> <tr> <td>2</td><td>12th grade pass</td><td>1.5 years of relevant experience in Retail operations with basic digital literacy skills.</td></tr> <tr> <td>3</td><td>Previous relevant Qualification of NSQF Level 4</td><td>1.5-year relevant experience in Retail operations</td></tr> <tr> <td>4</td><td>Previous relevant Qualification of NSQF Level 3.5</td><td>3 years relevant experience in Retail operations</td></tr> </tbody> </table>						S. No.	Academic/Skill Qualification (with Specialization - if applicable)	Relevant Experience (with Specialization - if applicable)	1	Completed or pursuing 1st year of 3 year/ 4 year UG or equivalent with basic digital literacy skills.	No Experience Required	2	12th grade pass	1.5 years of relevant experience in Retail operations with basic digital literacy skills.	3	Previous relevant Qualification of NSQF Level 4	1.5-year relevant experience in Retail operations	4	Previous relevant Qualification of NSQF Level 3.5	3 years relevant experience in Retail operations
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8.	Credits Assigned to this NOS-Qualification, Subject to Assessment (as per National Credit Framework (NCrF))	04		9. Common Cost Norm Category (I/II/III) (wherever applicable): I																		
10.	Any Licensing Requirements for Undertaking Training on This Qualification (wherever applicable)	Not Applicable																				
11.	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																				
		<table border="1"> <thead> <tr> <th>Training Delivery Mode</th><th>Theory (Hours)</th><th>Practical (Hours)</th><th>Total (Hours)</th></tr> </thead> <tbody> <tr> <td>Classroom (offline)</td><td>-</td><td>20</td><td>20</td></tr> <tr> <td>Online</td><td>50</td><td>50</td><td>100</td></tr> </tbody> </table>				Training Delivery Mode	Theory (Hours)	Practical (Hours)	Total (Hours)	Classroom (offline)	-	20	20	Online	50	50	100					
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		(Refer Blended Learning Annexure for details)																				
12.	Assessment Criteria	<table border="1"> <thead> <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> </thead> <tbody> <tr> <td>40</td><td>60</td><td>-</td><td>-</td><td>100</td><td>70</td></tr> </tbody> </table>					Theory (Marks)	Practical (Marks)	Project (Marks)	Viva (Marks)	Total (Marks)	Passing %age	40	60	-	-	100	70				
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13.	Is the NOS Amenable to Persons with Disability	☒ Yes ☐ No If “Yes”, specify applicable type of Disability: Locomotor	
14.	Progression Path After Attaining the Qualification, wherever applicable <i>(Please show Professional and Academic progression)</i>	NA	
15.	How participation of women will be encouraged?	Offering flexible training schedules, Targeted outreach to promote participation in technology-driven roles, Gender-inclusivity awareness/ advocacy events and counselling	
16.	Other Indian languages in which the Qualification & Model Curriculum are being submitted	Hindi	
17.	Is similar NOS available on NQR-if yes, justification for this qualification	☐ Yes ☒ No URLs of similar Qualifications:	
18.	Name and Contact Details Submitting / Awarding Body SPOC <i>(In case of CS or MS, provide details of both Lead AB & Supporting ABs)</i>	Name: Ms. Amruta Khodke Email: amruta.khodke@rasci.in Contact No: +91 22 40058210-5; Ext. 17 Website: https://www.rasci.in	
19.	Final Approval Date by NSQC: 08/05/2025	20. Validity Duration: 3 Years	21. Next Review Date: 08/05/2028

Section 2: Training Related

1.	Trainer's Qualification and experience in the relevant sector (in years) <i>(as per NCVET guidelines)</i>	Graduate/Postgraduate in Retail/Technology, 5+ years in omnichannel retail management. Platform Certification: Recommended that the Trainer is certified for the Job Role: "Trainer (VET and skills)", mapped to the Qualification Pack: "MEP/Q2601, v2.0". The minimum accepted score is 80%
2.	Master Trainer's Qualification and experience in the relevant sector (in years) <i>(as per NCVET guidelines)</i>	Graduate/Postgraduate, 8+ years in retail leadership or customer experience technology roles.
3.	Tools and Equipment Required for the Training	☒ Yes ☐ No <i>(If "Yes", details to be provided in Annexure)</i>
4.	In Case of Revised NOS, details of Any Upskilling Required for Trainer	Not Applicable

Section 3: Assessment Related

1.	Assessor's Qualification and experience in relevant sector (in years) <i>(as per NCVET guidelines)</i>	Graduate/Postgraduate in Retail/Technology, 5+ years in omnichannel management and assessment/training roles. Platform Certification: Recommended that the Assessor is certified for the Job Role: "Assessor (VET and skills)", mapped to the Qualification Pack: "MEP/Q2701, v2.0". The minimum accepted score is 80%.
2.	Proctor's Qualification and experience in relevant sector (in years) <i>(as per NCVET guidelines), (wherever applicable)</i>	Not Applicable
3.	Lead Assessor's/Proctor's Qualification and experience in relevant sector (in years) <i>(as per NCVET guidelines)</i>	Graduate/Postgraduate in Retail/Technology, 8+ years in omnichannel or customer experience leadership.
4.	Assessment Mode <i>(Specify the assessment mode)</i>	The assessment for the theory will be conducted online and practical will be conducted offline on a digital assessment platform with comprehensive auditable trails.

5.	Tools and Equipment Required for Assessment	☒ Same as for training ☐ Yes ☐ No <i>(details to be provided in Annexure-if it is different for Assessment)</i>
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Section 4: Evidence of the Need for the Standalone NOS

Provide Annexure/Supporting documents name.

1.	Government /Industry initiatives/ requirement (Yes/No): No
2.	Number of Industry validation provided: 22
3.	Estimated number of people to be trained: 1500
4.	Evidence of Concurrence/Consultation with Line/State Departments (In case of regulated sectors): Annexure Enclosed

Section 5: Annexure & Supporting Documents Check List

Specify Annexure Name / Supporting document file name

1.	Annexure: NCrf/NSQF level justification based on NCrf/NSQF descriptors <i>(Mandatory)</i>	Enclosed
2.	Annexure: List of tools and equipment relevant for NOS <i>(Mandatory, except in case of online course)</i>	Enclosed
3.	Annexure: Performance and Assessment Criteria <i>(Mandatory)</i>	Enclosed
4.	Annexure: Assessment Strategy <i>(Mandatory)</i>	Enclosed
5.	Annexure: Blended Learning <i>(Mandatory, in case selected Mode of delivery is Blended Learning)</i>	Not Applicable
6.	Annexure: Acronym and Glossary <i>(Optional)</i>	Enclosed
7.	Annexure/Supporting Document: Standalone NOS- Performance Criteria Details Annexure/Document with PC-wise detailing as per NOS format (Mandatory- Public view)	Enclosed
8.	Supporting Document: Model Curriculum <i>(Mandatory – Public view)</i>	Enclosed

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	Comprehensive knowledge of omnichannel retail strategies, AI, IoT, CRM, and customer experience frameworks.	Requires a deep understanding of retail operations, data analytics, and emerging technologies to design and manage effective strategies	4.5
Professional and Technical Skills/ Expertise/ Professional Knowledge	Expertise in AI-driven data analytics, IoT for inventory management, CRM systems, and integrated marketing.	Involves using advanced technical skills to implement omnichannel strategies and optimize customer experiences through AI/IoT.	4.5
Employment Readiness & Entrepreneurship Skills & Mind-set/Professional Skill	Ability to identify customer needs, leverage AI insights, and apply IoT for operational efficiency, with a focus on innovation and leadership.	Job role requires critical thinking, problem-solving, and decision-making skills to drive business growth and customer satisfaction.	4.5
Broad Learning Outcomes/Core Skill	Proficiency in managing complex omnichannel retail environments using AI, IoT, and customer engagement tools.	Learners are expected to independently manage technology-enabled retail operations, applying best practices for data-driven decisions.	4.5
Responsibility	Managing teams, training staff on new technologies, overseeing omnichannel performance, and ensuring customer satisfaction.	Reflects responsibility for leading teams, making strategic decisions, and continuously improving operations in a dynamic retail environment.	4.5

Annexure: Tools and Equipment (lab set-up)

List of Tools and Equipment

Batch Size: 20

S. No.	Tool / Equipment Name	Specification	Quantity for specified Batch size
1.	Data Analytics Software	Microsoft Excel, Tableau, or Google Data Studio	10 licenses (2 participants per license)
2.	AI-Based Customer Segmentation Tools	HubSpot, Salesforce	10 licenses (2 participants per license)
3.	CRM and ERP Software	SAP, Microsoft Dynamics, or Salesforce	5 licenses (shared use)
4.	Journey Mapping Software	Miro, Lucidchart	5 licenses (shared use)
5.	Cybersecurity Software	Norton, McAfee	5 licenses (shared use)
6.	Market Research Tools	Statista, Mintel	5 licenses (shared use)
7.	Social Media Management Software	Buffer, Sprout Social	5 licenses (shared use)
8.	Performance Dashboard Tools	Klipfolio	5 licenses (shared use)
9.	Computers/Laptops	Latest Windows/Mac OS systems with internet connectivity	20 units (1 per participant)
10.	Projector and Screen	HD projector with 3000 lumens brightness and screen	1 set
11.	Whiteboard and Markers	Standard whiteboard with dry-erase markers	1 set
12.	Survey Tools	Online tools like Google Forms or SurveyMonkey	5 licenses (shared use)
13.	Video Conferencing Tools	Zoom or Microsoft Teams for remote collaboration	5 licenses (shared use)
14.	Interactive Display Devices	Smartboards or interactive display monitors	1 unit
15.	Wi-Fi Router/Internet Connection	High-speed internet connection	1 setup
16.	AI-Powered Chatbot Tools	Dialogflow, IBM Watson, or Drift	5 licenses (shared use)
17.	AI-Based Market Analysis Tools	Crayon, Crayon Intelligence)	5 licenses (shared use)
18.	Customer Feedback Tools	Qualtrics, Typeform	5 licenses (shared use)
19.	AI-Powered Personalization Tools	Dynamic Yield, Salesforce Einstein,	5 licenses (shared use)

Classroom Aids

The aids required to conduct sessions in the classroom are

1. LCD Projector
2. Desktop / Laptop computer with internet connections

3. White-board and white-board marker
4. Pen & notepad
5. Presentation deck

Annexure: Industry Validations Summary

S. No	Organization Name	Representative Name	Designation	Contact Address	Contact Phone No	E-mail ID	LinkedIn Profile (if available)
1	Titan	Sabharatnam Narayanan	Head -Retail Training	Bengaluru	992025444115	narayanans@titan.co.in	-
2	Shoppers Stop	Aniruddha Mahajan	Deputy VP HR operations	Maharashtra	022-42497000	aniruddha.mahajan@shoppersstop.com	-
3	Pay nearby	Anand kumar Bajaj	Director	Maharashtra	7738947773	anand@paynearby.in	-
4	Big basket	Kavita Bagwe	Regional HR – Head Mumbai	Maharashtra	9619791692	Kavita.bagwe@bigbasket.com	-
5	Max – landmark Group	Dinesh Kumar	Senior Manager	Bengaluru	77609970816	dinesh.kumar@landmarkgroup.in	-
6	BIBA	Sushanta Majumdar	Manager - HR	Gurugram	9830857006	Majumdar@bibaindia.com	-
7	Medplus	D.Hari hara Rao	Head-HR	Hyderabad	8888051127	harid@medplusindia.com	-
8	Reliance SMART	Jeeva Balakrishnan	Chief Talent Officer	Maharashtra	9940011500	Jeeva.balakrishnan@ril.com	-
9	Reliance digital						
10	Jio mart, Netmeds.com, AJIO.com, Urban Ladder, Jio Mart digital, Jio Digital Life						

11	Reliance TRENDS, Reliance Jewels, TRENDS Footwear						
12	7 Eleven, Reliance Fresh signature, Freshpik, SMART Point						
13	Hamleys						
14	GAP						
15	METRO wholesale						
16	Fashion Factory						
17	Reliance mall						
18	Joyalukkas	Joseph Christo	DGM HR & Admin	Kerala	9447767916	christo@joyalukkas.com	-
19	ABFRL	Suresh Shanbagh	Sr General Manager HR	Mumbai	8652533236	suresh.shanbagh@abfrl.adityabirla.com	-
20	RJ corp	Tavleen Nayal	AGM-HR	New Delhi	9582339496	tavleen.nayal@rjcorpretail.com	-
21	Croma	Robin Sharma	HRBP	Mumbai	7738384471	robin.sharma@croma.com	-
22	Viveks	Vasumathi Kalyanaraghavan	Manager- HR & Admin	Chennai	9566151348	vasumathi.k@viveks.com	-

Annexure: Training Details

Training Projections:

Year	Estimated Training # of Total Candidates	Estimated training # of Women	Estimated training # of People with Disability
2024-25	300	120	3
2025-26	600	240	4
2026-27	600	250	4

Data to be provided year-wise for next 3 years.

Annexure: Blended Learning

Blended Learning Estimated Ratio & Recommended Tools:

S. No.	Select the Components of the NOS	List Recommended Tools – for all Selected Components	Offline: Online Ratio
1	☒ Theory/ Lectures - Imparting theoretical and conceptual knowledge	LCD, Projector, Laptop, MSOffice Suite, Flipchart, whiteboard, Markers, wi-fi connectivity	00:100
2	☐ Imparting Soft Skills, Life Skills and Employability Skills /Mentorship to Learners		
3	☒ Showing Practical Demonstrations to the learners	LCD Projector & HD Projector, Laptop/Computer with Internet, Whiteboard, Flipchart, Markers, Duster, Trainer Chair & Table, Demonstration Table, Pin-up Boards, Sticky Notes, Smartboard. Customer Data & Analytics: Microsoft Excel, Tableau, or Google Data Studio. AI-Based Customer Segmentation Tools: HubSpot, Salesforce, CRM Software: Salesforce, Zoho CRM, HubSpot, Social Media Management Tools: Buffer, Sprout Social, Survey Tools: Google Forms, SurveyMonkey. ERP & IoT Systems: SAP, Microsoft Dynamics (ERP & Inventory Management), IoT monitoring tools integrated	80:20

		with ERP Journey Mapping & Design: Miro, Lucid chart Market Research & Trend Analysis: Statista, Mintel, Crayon Intelligence Marketing & Social Media Management: Buffer, Sprout Social, Trello, Slack, Microsoft Teams (for collaboration) Presentation & Content Tools: Microsoft PowerPoint, Google Slides Cybersecurity Tools: Norton, McAfee or similar protection software	
4	☒ Imparting Practical Hands-on Skills/ Lab Work/ workshop/ shop floor training	LCD Projector & HD Projector, Laptop/Computer with Internet, Whiteboard, Flipchart, Markers, Duster, Trainer Chair & Table, Demonstration Table, Pin-up Boards, Sticky Notes, Smartboard. Customer Data & Analytics: Microsoft Excel, Tableau, or Google Data Studio. AI-Based Customer Segmentation Tools: HubSpot, Salesforce, CRM Software: Salesforce, Zoho CRM, HubSpot, Social Media Management Tools: Buffer, Sprout Social, Survey Tools: Google Forms, SurveyMonkey. ERP & IoT Systems: SAP, Microsoft Dynamics (ERP & Inventory Management), IoT monitoring tools integrated with ERP Journey Mapping & Design: Miro, Lucid chart Market Research & Trend Analysis: Statista, Mintel, Crayon Intelligence Marketing & Social Media Management: Buffer, Sprout Social, Trello, Slack, Microsoft Teams (for collaboration) Presentation & Content Tools: Microsoft PowerPoint, Google Slides Cybersecurity Tools: Norton, McAfee or similar protection software	80:20

5	☐ Tutorials/ Assignments/ Drill/ Practice	Not applicable	Not Applicable
6	☐ Proctored Monitoring/ Assessment/ Evaluation/ Examinations		
7	☐ On the Job Training (OJT)/ Project Work Internship/ Candidate Training	Not applicable	Not Applicable

NSQC APPROVED

Annexure: Standalone NOS- Performance Criteria details

1. **Description:** *This National Occupational Standard (NOS) outlines the competencies required for professionals in retail who aim to excel in omnichannel strategies and customer experience management, leveraging advanced technologies such as AI and IoT. Its objective is to equip retail managers and executives with the skills to design, implement, and evaluate integrated marketing strategies that enhance customer engagement and satisfaction across multiple channels. This NOS is intended for retail professionals looking to future-proof their operations and drive innovation in a rapidly evolving market.*

2. **Scope:**

The scope covers the following:

- Use AI/IOT to Manage Omni Channel Strategies

3. **Elements and Performance Criteria**

Use AI/ IOT to Manage Omni channel Strategies

To be competent, the user/individual on the job must be able to:

- PC1. Analyse customer data with AI to identify and target distinct consumer segments.
- PC2. Implement integrated marketing strategies that align messaging across all channels using IoT insights.
- PC3. Optimize customer journey mapping for seamless experiences using AI algorithms.
- PC4. Enhance customer engagement and retention through CRM systems and predictive analytics.
- PC5. Evaluate omnichannel strategy effectiveness using advanced analytics and machine learning.
- PC6. Train staff on omnichannel practices and emerging technologies for improved customer experience.
- PC7. Collaborate with teams to implement IoT-driven inventory solutions for omnichannel fulfilment.
- PC8. Drive engagement initiatives across platforms with AI-informed social media strategies.
- PC9. Adapt product offerings based on real-time sales data and customer feedback.
- PC10. Establish a proactive customer service framework using AI chatbots and IoT connectivity.
- PC11. Integrate AR/VR and AI solutions to enhance customer interactions and operational efficiency

PC12. Conduct market research with AI tools to identify consumer behaviour shifts and trends.

PC13. Formulate partnerships with technology providers to enhance omnichannel capabilities.

Knowledge and Understanding (KU):

The individual on the job needs to know and understand:

- KU1 Omnichannel retailing principles and their strategic implications for customer experience and brand loyalty, with a focus on future technologies.
- KU2 In-depth knowledge of various sales channels, including emerging platforms, and strategies for their effective integration through AI and IoT.
- KU3 Advanced understanding of customer data analytics methodologies, including machine learning, and their application in strategic decision-making.
- KU4 Comprehensive knowledge of digital marketing frameworks and technologies, including content marketing, SEO, and advanced social media strategies enhanced by AI insights.
- KU5 Expertise in CRM systems, including customization and utilization for enhancing customer relationships and personalization using AI analytics.
- KU6 Knowledge of IoT applications in inventory management and their role in supporting omnichannel operations and fulfillment strategies.
- KU7 Understanding of legal, ethical, and regulatory considerations in omnichannel marketing, data management, and emerging technologies.
- KU8 Expertise in developing and implementing best practices for customer service and experience management across all channels using AI-driven solutions.
- KU9 Familiarity with emerging technologies (e.g., AR/VR, AI, IoT) and their potential impact on the omnichannel retail landscape and customer experience.
- KU10 Mastery of qualitative and quantitative market research methodologies, including the use of AI tools to assess consumer preferences and behaviour shifts.

Generic Skills (GS):

User/individual on the job needs to know how to:

- GS1. Advanced communication skills for articulating complex strategies and influencing diverse stakeholder groups, especially in technology-driven environments.
- GS2. Strong analytical and critical thinking skills to interpret data, including AI-driven insights, and inform strategic decisions effectively.
- GS3. Enhanced problem-solving abilities for addressing multifaceted challenges in the customer journey across channels, utilizing technology as a resource.
- GS4. Leadership and teamwork skills to drive cross-functional collaboration and align teams toward common objectives in a technology-enhanced retail environment.
- GS5. High adaptability and agility in responding to evolving market trends, consumer preferences, and technological advancements.

- GS6. Superior time management and organizational skills to juggle multiple strategic initiatives and projects.
- GS7. Customer-centric orientation to design and implement strategies that prioritize customer satisfaction and loyalty, leveraging AI for personalization.
- GS8. Creativity and innovation skills for conceptualizing and executing compelling marketing campaigns and customer engagement strategies utilizing emerging technologies.
- GS9. Proficiency in project management, including resource allocation, risk management, and performance tracking in technology-driven projects.
- GS10. Advanced digital literacy to leverage the latest tools and platforms for omnichannel marketing and sales optimization, including AI and IoT applications.

Annexure: Assessment Criteria

Detailed PC-wise assessment criteria and assessment marks for the NOS are as follows:

S. No.	Assessment Criteria for Performance Criteria	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC1	Analyze customer data with AI to identify and target distinct consumer segments.	4	6	-	-
PC2	Implement integrated marketing strategies that align messaging across all channels using IoT insights.	4	6	-	-
PC3	Optimize customer journey mapping for seamless experiences using AI algorithms.	3.2	4.8	-	-
PC4	Enhance customer engagement and retention through CRM systems and predictive analytics.	3.2	4.8	-	-
PC5	Evaluate omnichannel strategy effectiveness using advanced analytics and machine learning.	3.2	4.8	-	-
PC6	Train staff on omnichannel practices and emerging technologies for improved customer experience.	2.8	4.2	-	-
PC7	Collaborate with teams to implement IoT-driven inventory solutions for omnichannel fulfillment.	3.2	4.8	-	-
PC8	Drive engagement initiatives across platforms with AI-informed social media strategies.	3.2	4.8	-	-
PC9	Adapt product offerings based on real-time sales data and customer feedback.	3.2	4.8	-	-
PC10	Establish a proactive customer service framework using AI chatbots and IoT connectivity.	3.2	4.8	-	-
PC11	Integrate AR/VR and AI solutions to enhance customer interactions and operational efficiency.	2.8	4.2	-	-
PC12	Conduct market research with AI tools to identify consumer behavior shifts and trends.	2	3	-	-
PC13	Formulate partnerships with technology providers to enhance omnichannel capabilities.	2	3	-	-
Total Marks		40	60	-	-

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.

Mention the detailed assessment strategy in the provided template.

1. Assessment System Overview:

- Batches are assigned to the NCVET recognised RASCI empaneled Assessment Agencies(AA) for conducting all Government funded NSQF assessment on SIP and or email 7 days to 15 days in advance or based on the availability of the complete information received from the training entities on completion dates and receipt of assessment fee for assessment of the training batches.
- Assessment Agencies (AA) send the assessment confirmation to VTP/TC looping RASCI within 24 hours of receipt of information on assessment assignment from RASCI.
- Assessment agency reviews the assessment centre/ Training Centre (TC)/ VTP centre before the commencement of assessments against the prescribed infrastructure and equipment.
- Assessment agency deploys the certified Assessor or Certified Proctor for executing the assessment.
- The assessment will be conducted online on digital devices such as computers, Tabs, Laptops, Smart Phones either through web browser or apps having the ability to auto proctor and remote physical proctor the assessments.
- The candidate/ learner must possess the OJT completion certificate (**If OJT is mandatory for the qualification**) duly signed and stamped by the authorised signatory on the letter head of the employer where the OJT was imparted. The candidates/ learners without the OJT completion certificate must not be allowed to undertake the assessments (**If OJT is mandatory for the qualification**).
- **Theory Assessment (Online):** Theory assessments will be Multiple Choice Questions (MCQ) based.
- **Practical:** This test will be administered by and under the supervision of a certified assessor. The candidates/ learner will be assessed based on their performance against the rubrics/ observation checklist. The practical assessment will consist of case study or scenario-based/ or real time task/ activity in a simulated work environment. The learner will be graded/ marked on a digital assessment platform. Based on the grade/ marks provided by the assessor, the

digital assessment platform automatically determines the results. The entire intervention must be video recorded as evidence and made available to the AB as and when demanded. The AA is required to store comprehensive auditable trails as per the SOP of the AB.

- **A certified assessor is mandatory** for this qualification as the practical assessments are conducted through rubric based scoring based on case study / scenario-based / Real time task-based activity on digital platform with comprehensive auditable trails under the supervision of qualified/ certified assessor. The results are auto determined by the digital assessment platform based on the grading provided by the certified assessor.
- The Assessment Agency must ensure the Assessor arrives 1 hour before the commencement of assessments.
- Assessment agency confirms the commencement and conduct of assessments to the training entity and RASCI provided the Assessment centre/ TC/ VTP Centre for assessment comply to the infrastructure and equipment prescribed by RASCI for conduct of assessments.
- The assessment agency monitors and records the proceedings of the assessment on ground and will share the access of live feeding/ audit trails of the proceedings from its digital assessment platform.
- RASCI monitors/ audits the assessment process & records.
- **For Remote Online Assessments:** AA must follow and implement all the guidelines of RASCI for conducting remote online assessments.

2. Testing Environment:

- AA/ Assessor/ Proctor to note the Assessment location, date and time.
- If the batch size is more than 30, then there should be 2 Assessors/ proctors deployed by the AA.
- The assessor and proctors must conduct the orientation session to the candidates on the assessment protocols and processes as prescribed by RASCI.
- Check and confirm that the allotted time to the candidates to complete Theory & Practical Assessment is correct as per the assessment blueprint.
- Assessment centre/ TC/ VTP centre must verify the identity of the Assessor/ Proctor in alignment with the SOP for assessments released by RASCI.
- The Assessor/ Proctor of the AA must verify the identity and the training attendance of the candidate as per the scheme and or RASCI assessment SOP.
- Only those candidates complying with the requisite training attendance prescribed by the scheme guidelines and or RASCI guidelines must be allowed to proceed and undertake the assessments.

- AA will be held responsible for any deviation on the above and will be levied penalties including revoking of Assessment Agency status of RASCI as per NCVET guidelines and RASCI assessment guidelines.
- The Assessment Centre/ VTP/TC including the Assessment Agency, Assessor and or Proctor will adhere to all the guidelines under the SOP for assessments of RASCI.
- **For Remote Online Assessments:** AA must follow and implement all the guidelines under conducting remote online assessments.

3. Assessment Quality Assurance levels/Framework:

- Question bank is created by the Subject Matter Experts (SME) from the Assessment Agency and are verified by the other SME and approved by RASCI.
- Questions are mapped to the specified assessment criteria/ assessment blueprint approved by RASCI for the qualification.
- Assessor must be ToA certified/ Proctor must be certified as per the guidelines of RASCI.
- Trainer must be ToT Certified by RASCI on this qualification and must possess a valid ToT certificate during the conduct of training of the batch being assessed.
- Assessor/ Proctor must verify the validity of the ToT certificate of the trainer.
- The assessment must **NOT** be allowed to continue if the ToT certificate of the trainer was or is not valid during the duration/ tenure of training of the batch being assessed.
- Ensure all assessment data and evidence is collected and stored as per the requirements.
- AA/ Assessor/ Proctor must report any noncompliance/ malpractices to RASCI immediately.
- The Assessment Centre/ VTP/TC including the Assessment Agency, Assessor and or Proctor will adhere to all the guidelines under the SOP for assessments of RASCI.
- **For Remote Online Assessments:** AA must follow and implement all the guidelines under conducting remote online assessments.

4. Types of evidence or evidence-gathering protocol:

- Time-stamped & geotagged reporting of the assessor from assessment location

- Centre photographs with signboards and scheme specific branding
- The attendance sheet signed by the candidates with the declaration certifying the validity of the candidate by the VTP/ TC Official/ Assessment Centre official with stamp/ seal and signature of the authorised signatory of VTP/TC/ Assessment Centre.
- Every candidate must produce their mandatory OJT Completion Certificate duly signed and stamped from the authorised signatory of the employer where the OJT was completed. The copy of the same must be collected and stored by the assessor/ proctor/ AA and submitted to RASCI/ AB on demand.
- Assessment attendance sheets co-certified by Assessor/ Proctor
- Training attendance records of the candidate, AEBAS attendance records wherever applicable.
- Feedback forms prescribed by RASCI on the assessment process from the assessed candidates.
- Group Photograph of the trainees, assessor and training centre officials with geotagging and time stamp.
- The soft copy of the answer sheets and or hard copies including marking sheet signed by the Assessor/ Proctor approved by authorised official of Assessment Agency with signature and stamp.
- Video recording and still photographs (minimum 5) of the entire assessment process of the batch supported by video recording and intermittent still photographs on the digital assessment platform of each candidate while she/ he is undergoing assessments.
- The credibility score report on the digital online assessment platform in alignment with RASCI SOP for assessment.
- A timestamped image of the candidate on the assessment platform including the image of the Govt. authorised identity card of the candidate must be made available once the candidate takes the assessment.
- A timestamped image of the candidate is available once the candidate takes the assessment.
- **Candidate Photograph/ ID photograph:** A candidate snapshot and his/her ID snapshot is being captured before the candidate is allowed to start the test.
- **Assessment Logs:** AA Maintains a detailed audit log of each assessment that is administered. Audit logs should be recoverable on requests from RASCI. Assessment audit log should include:
 - The time when the assessment is being started.
 - Flags in case an additional person is there

- Flags in case candidate navigate away from the window.
 - Candidate away from the test window
 - Any other device spotted.
 - The time when the candidate finishes the test.
 - Question wise and NOS-wise summary of the attempt
 - Response sheets/ Answer sheets including the question paper.
 - All applicable other credibility scores including the above of the candidate.
- **For Remote Online Assessments:** AA must follow and implement all the guidelines under conducting remote online assessments.

5. Method of verification or validation of assessment processes:

- AA must provide the live feed access to RASCI through the appropriate digital infrastructure such as IP camera etc to seamlessly to remotely monitor the assessments happening at the Assessment centre/ VTP Centre/ TC.
- Surprise visit to the assessment location by RASCI authorised personnel and or agency including RASCI officials

6. Method for assessment documentation, archiving, and access

- Hard and hard copies converted to soft copies of the documents are stored.
- The assessment logs including the response sheets and documentation recommended by RASCI from time to time must be maintained by the AA in soft and hard form for 5 years and access to validate/ Audit and comment must be provided to RASCI.
- The documentation mentioned in the above SI No 1 to SI No 6 needs to be archived on the cloud server and maintained by the Assessment Agency soft form with a constant seamless access being provided to RASCI by AA. The hard copies of the same needs to be maintained by AAs and given access to RASCI on demand.
- **On the Job:** Not applicable to this Qualification

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

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 on the basis of their main economic function, product, service or technology.