

QUALIFICATION FILE

Android Application Technician – Telecom Devices

☒ 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: 4.0

Submitted By:

Telecom Sector Skill Council

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Email: tssc@tsscindia.com

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Section 1: Basic Details

1.	Qualification Name	Android Application Technician – Telecom Devices																			
2.	Sector/s	Telecom																			
3.	Type of Qualification: ☐ New ☒ Revised ☐ Has Electives/Options ☐ OEM	NQR Code & version of existing/previous qualification: (2022/TEL/TSSC/07006, V5.0)	Qualification Name of existing/previous version: Android Application Technician – Telecom Devices																		
4.	a. OEM Name b. Qualification Name (Wherever applicable)																				
5.	National Qualification Register (NQR) Code &Version (Will be issued after NSQC approval)	QG-04-TL-04073-2025-V2-TSSC	6. NCrF/NSQF Level: 4.0																		
7.	Award (Certificate/Diploma/Advance Diploma/ Any Other (Wherever applicable specify multiple entry/exits also & provide details in annexure)	Certificate																			
8.	Brief Description of the Qualification	An Android Application Technician – Telecom Devices is responsible for assisting in the setup, configuration, and basic implementation of Android-based applications on telecom devices. The individual assists in activities such as preparing the development environment, configuring user interfaces using standard layouts, application testing, and providing technical assistance during application deployment. The role focuses on implementing and maintaining existing application components under supervision.																			
9.	Eligibility Criteria for Entry for Student/Trainee/Learner/Employee	a. Entry Qualification & Relevant Experience: <table border="1"> <thead> <tr> <th>S. No.</th> <th>Academic/Skill Qualification (with Specialization - if applicable)</th> <th>Required Experience (with Specialization - if applicable)</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td>12th Grade Pass</td> <td></td> </tr> <tr> <td>2.</td> <td>Completed 2nd year of 3-year diploma after 10th in Computer Engineering/ Software Engineering Information Technology/ Mobile App Development</td> <td></td> </tr> <tr> <td>3.</td> <td>10th Grade Pass</td> <td>3 years of experience in Telecom/IT/Programming languages</td> </tr> <tr> <td>4.</td> <td>Previous relevant Qualification of NSQF Level 3.0</td> <td>3 years of relevant experience in Telecom/IT/Programming languages</td> </tr> <tr> <td>5.</td> <td>Previous relevant Qualification of NSQF Level 3.5</td> <td>1.5 years of relevant experience in Telecom/IT/Programming languages</td> </tr> </tbody> </table> b. Age: NA		S. No.	Academic/Skill Qualification (with Specialization - if applicable)	Required Experience (with Specialization - if applicable)	1.	12th Grade Pass		2.	Completed 2nd year of 3-year diploma after 10th in Computer Engineering/ Software Engineering Information Technology/ Mobile App Development		3.	10th Grade Pass	3 years of experience in Telecom/IT/Programming languages	4.	Previous relevant Qualification of NSQF Level 3.0	3 years of relevant experience in Telecom/IT/Programming languages	5.	Previous relevant Qualification of NSQF Level 3.5	1.5 years of relevant experience in Telecom/IT/Programming languages
S. No.	Academic/Skill Qualification (with Specialization - if applicable)	Required Experience (with Specialization - if applicable)																			
1.	12th Grade Pass																				
2.	Completed 2nd year of 3-year diploma after 10th in Computer Engineering/ Software Engineering Information Technology/ Mobile App Development																				
3.	10th Grade Pass	3 years of experience in Telecom/IT/Programming languages																			
4.	Previous relevant Qualification of NSQF Level 3.0	3 years of relevant experience in Telecom/IT/Programming languages																			
5.	Previous relevant Qualification of NSQF Level 3.5	1.5 years of relevant experience in Telecom/IT/Programming languages																			

10.	Credits Assigned to this Qualification, Subject to Assessment (as per National Credit Framework (NCrF))	17	11. Common Cost Norm Category (I/II/III) (wherever applicable): I																							
12.	Any Licensing requirements for Undertaking Training on This Qualification (wherever applicable)	NA																								
13.	Training Duration by Modes of Training Delivery (Specify Total Duration as per selected training delivery modes and as per requirement of the qualification)	☐ Offline ☐ Online ☒ Blended <table border="1"> <thead> <tr> <th>Training Delivery Modes</th> <th>Theory (Hours)</th> <th>Practical (Hours)</th> <th>OJT Mandatory (Hours)</th> <th>OJT Recommended (Hours)</th> <th>Total (Hours)</th> </tr> </thead> <tbody> <tr> <td>Classroom (offline)</td> <td>150</td> <td>210</td> <td>150</td> <td></td> <td>510</td> </tr> <tr> <td>Online</td> <td>150</td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table> (Refer Blended Learning Annexure for details)							Training Delivery Modes	Theory (Hours)	Practical (Hours)	OJT Mandatory (Hours)	OJT Recommended (Hours)	Total (Hours)	Classroom (offline)	150	210	150		510	Online	150				
Training Delivery Modes	Theory (Hours)	Practical (Hours)	OJT Mandatory (Hours)	OJT Recommended (Hours)	Total (Hours)																					
Classroom (offline)	150	210	150		510																					
Online	150																									
14.	Aligned to NCO/ISCO Code/s (if no code is available mention the same)	NCO -2015/2153.0101																								
15.	Progression path after attaining the qualification (Please show Professional and Academic progression)	Android Application Technician – Telecom Devices (NSQF Level 4) → Android Developer Lead (NSQF Level 5)																								
16.	Other Indian languages in which the Qualification & Model Curriculum are being submitted	Hindi																								
17.	Is similar Qualification(s) available on NQR-if yes, justification for this qualification	☐ Yes ☒ No URLs of similar Qualifications:																								
18.	Is the Job Role Amenable to Persons with Disability	☒ Yes ☐ No If “Yes”, specify applicable type of Disability: Motor Impairment, Hearing Impairments, Speech and Language Disorders																								
19.	How Participation of Women will be Encouraged	Encouraging the participation of women in the role of Android Application Technician – Telecom Devices in the telecom sector can be achieved through strategies that foster diversity, inclusivity, and gender equality. This can include offering targeted training and skill development programs for female candidates interested in these roles. Additionally, creating a workplace culture that is safe, respectful, and inclusive, and free from harassment or discrimination, is crucial for ensuring equal opportunities for women in the telecom sector.																								
20.	Are Greening/ Environment Sustainability Aspects Covered (Specify the NOS/Module which covers it)	☒ Yes ☐ No NOS: TEL/N9110																								
21.	Is Qualification Suitable to be Offered in Schools/Colleges	Schools ☐ Yes ☐ No Colleges ☒ Yes ☐ No																								
22.	Name and Contact Details of Submitting / Awarding Body SPOC (In case of CS or MS, provide details of both Lead AB & Supporting ABs)	Name: Mr. Praveen Sirohi Email: ceo@tsscindia.com Website: www.tsscindia.com Contact No.: 0124-4148029																								

23.	Final Approval Date by NSQC: 08-05-2025	24. Validity Duration: 3 years	25. Next Review Date: 30-04-2028
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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 Rec.-Recommended Proj.-Project

S. No	NOS/Module Name	NOS/Module Code & Version (if applicable)	Core/Non-Core	NCrF/NS QF 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.	Assist in Configuring Android Development Environment and User Interface for Telecom Devices	TEL/N2300, v5.0	Core	4.0	6	70	70	40	-	180	30	50	-	20	100	30
2.	Assist in Configuring Value Added Services (VAS) in Android Applications for Telecom Devices	TEL/N2301, v5.0	Core	4.0	5	20	60	70	-	150	30	50	-	20	100	25
3.	Assist in Testing and Publishing Android Applications for Telecom Devices	TEL/N2302, v5.0	Core	4.0	4	20	60	40	-	120	30	50	-	20	100	25
4.	Follow sustainability practices in the development of mobile applications	TEL/N9110, v1.0	Core	4.0	1	10	20	-	-	30	30	50	-	20	100	10
5.	Employability Skills (30 Hours)	DGT/VSQ/N0101, v1.0	Non-Core	2.0	1	30	-	-	-	30	20	30	-	-	50	10
Duration (in Hours) / Total Marks					17	150	210	150	-	510	140	230	-	80	450	100

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)	Educational Qualification: Graduate in any discipline, preferably Electronics and Communication /Telecom/ Information Technology/ Computer Science and other relevant fields. Industry & Training Experience: Minimum 6 years of experience after Graduation in Telecom/IT/ Programming languages- C, C++, Java, HTML etc. Certification: "Trainer" mapped to the Qualification Pack "MEP/Q2601, v3.0". Minimum accepted score is 80% aggregate.
2.	Master Trainer's Qualification and experience in the relevant sector (in years) (as per NCVET guidelines)	Educational Qualification: Graduate in any discipline, preferably Electronics and Communication /Telecom/ Information Technology/ Computer Science and other relevant fields. Industry & Training Experience: Minimum 8 years of experience after Graduation in Telecom/IT/ Programming languages- C, C++, Java, HTML etc. Certification: "Master Trainer" mapped to the Qualification Pack "MEP/Q2602, v3.0". Minimum accepted score is 90% aggregate.
3.	Tools and Equipment Required for Training	☐ Yes ☐ No (If "Yes", details to be provided in Annexure)
4.	In Case of Revised Qualification, Details of Any Upskilling Required for Trainer	NA

Section 4: Assessment Related

1.	Assessor's Qualification and experience in relevant sector (in years) (as per NCVET guidelines)	Educational Qualification: Graduate in any discipline, preferably Electronics and Communication /Telecom/ Information Technology/ Computer Science and other relevant fields. Industry & Training Experience: Minimum 6 years of experience after Graduation in Telecom/IT/ Programming languages- C, C++, Java, HTML etc.
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		Certification: “Assessor” mapped to the Qualification Pack “MEP/Q2701, v3.0”. Minimum accepted score is 80% aggregate.
2.	Proctor’s Qualification and experience in relevant sector (in years) <i>(as per NCVET guidelines)</i>	Educational Qualification: Graduate in any discipline, preferably Electronics and Communication /Telecom/ Information Technology/ Computer Science and other relevant fields. Industry & Training Experience: Minimum 6 years of experience after Graduation in Telecom/IT/ Programming languages- C, C++, Java, HTML etc. Certification: “Assessor” mapped to the Qualification Pack “MEP/Q2701, v3.0”. Minimum accepted score is 80% aggregate.
3.	Lead Assessor’s/Proctor’s Qualification and experience in relevant sector (in years) <i>(as per NCVET guidelines)</i>	Educational Qualification Graduate in any discipline, preferably Electronics and Communication /Telecom/ Information Technology/ Computer Science and other relevant fields. Industry & Training Experience: Minimum 8 years of experience after Graduation in Telecom/IT/ Programming languages- C, C++, Java, HTML etc. Certification: “Lead Assessor” mapped to the Qualification Pack “MEP/Q2702, v3.0” Minimum accepted score is 90% aggregate.
4.	Assessment Mode <i>(Specify the assessment mode)</i>	Offline/Online
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>

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 validation provided: 21
5.	Estimated nos. of persons to be trained and employed: 1560
6.	Evidence of Concurrence/Consultation with Line Ministry/State Departments: <i>Approved</i> 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 level/NSQF descriptors (Mandatory)	Annexure 1
2.	Annexure: List of tools and equipment relevant for qualification (Mandatory, except in case of online course)	Annexure 2
3.	Annexure: Detailed Assessment Criteria (Mandatory)	Annexure 6
4.	Annexure: Assessment Strategy (Mandatory)	Annexure 7
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)	Annexure 8
8.	Supporting Document: Model Curriculum (Mandatory – Public view)	Attached
9.	Supporting Document: Career Progression (Mandatory - Public view)	Attached
10.	Supporting Document: Occupational Map (Mandatory)	Attached
11.	Supporting Document: Assessment SOP (Mandatory)	Attached
12.	Any other document you wish to submit:	NO

Annexure 1: 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	The Professional Theoretical/Practical knowledge required for the job role are: Assist in Setting up Android Application Environment and User Interface - Understand the purpose of Android development tools such as JDK, Android Studio, and SDK Manager - Identify the structure of an Android project and the role of key files (manifest, Gradle, resource folders) - Assist in installing and configuring the development environment and virtual devices for testing - Use templates and tools to configure basic user interface layouts in Android applications - Understand how to navigate and edit layout files	An Android Application Technician – Telecom Devices at NSQF Level 4 assists in configuring Android environments, setting up user interfaces, supporting data management, service integration, testing, and publishing under supervision. The role involves applying standard procedures, using familiar tools, and following sustainability practices. This aligns with NSQF Level 4 descriptors that emphasize performing tasks with responsibility, limited autonomy, and the ability to apply basic technical knowledge in a structured context.	4.0

	(XML) using layout editors • Support basic application setup activities like logging and project configuration under supervision Assist in Configuring Android Value Added Services (VAS) • Understand basic storage options (SharedPreferences, Room, SQLite) and their use in telecom-based apps • Assist in storing and retrieving data using Android's built-in storage options • Support configuration of messaging services such as SMS, push notifications, and in-app messaging • Identify tools used for networking (e.g., Retrofit, Volley) and assist in setting up API connections • Understand GPS and location service basics and help integrate maps and real-time location features • Assist in configuring background services using standard components like WorkManager or JobScheduler • Follow instructions to test functionality related to VAS integrations across telecom devices Assist in Testing and Publishing Android Applications • Understand different types of mobile application testing (e.g., functional, UI, compatibility, basic security) • Follow pre-defined test cases and log testing outcomes for review by the QA team • Identify basic tools and methods for testing across multiple devices or Android versions • Assist in versioning, signing, and preparing applications for publishing • Understand Play Store submission guidelines and help complete app listings and metadata		
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	- Support tasks related to crash report monitoring and user feedback handling post-release Follow Sustainability Practices in Android Application Development - Understand the importance of sustainable coding and energy-efficient app performance - Follow instructions to write clean, modular, and optimized code that reduces memory and power use - Assist in minimizing data usage by enabling caching and efficient network requests - Help implement features such as dark mode and adaptive UI to reduce device energy consumption - Comply with basic environmental regulations and guidelines for green mobile application development - Reuse existing components and libraries to minimize redundancy and improve efficiency - Participate in activities promoting paperless workflows and eco-friendly digital practices		
Professional and Technical Skills/ Expertise/ Professional Knowledge	- Know the process of assisting in setting up the Android application development environment and configuring projects under supervision - Understand the basic principles of user interface configuration using standard tools and predefined layouts - Know how to support data management using Android databases (e.g., SharedPreferences, SQLite) for storing and retrieving application data - Understand how to assist in integrating messaging and networking services using standard APIs and tools - Know how to help configure location-based services using GPS and mapping tools - Understand the basic functioning of Android background services and assist in configuring scheduled or background tasks - Know how to follow test cases to test Android applications	An Android Application Technician – Telecom Devices requires practical and theoretical knowledge to assist in Android application setup, configuration, testing, and deployment. The role focuses on support tasks performed under supervision, aligning with NSQF Level 4, which emphasizes: - Familiar, routine, and predictable work context - Limited autonomy with clear direction from supervisors or senior professionals - Application of factual knowledge related to tools, technologies, and sustainability practices - Basic problem-solving and technical support in line with defined procedures	4.0

	for usability, functionality, and basic security • Understand the steps involved in assisting the publishing of Android apps on platforms like the Google Play Store • Know how to follow sustainable coding practices to support power and resource-efficient application behavior • Understand basic performance optimization techniques, such as reducing application size or limiting background activity • Know ways to minimize data usage by supporting caching and efficient API configurations • Understand the importance of adhering to environmental guidelines and sustainable development standards in mobile application development • Know how to configure energy-efficient UI/UX features, such as dark mode or adaptive themes • Understand the use of version control systems like Git for collaborative code management • Know how to identify and report common issues in Android configuration, UI, or integration, and assist in troubleshooting	This supports structured learning and work execution while contributing to the performance and sustainability of Android applications on telecom devices.	
Employment Readiness & Entrepreneurship Skills & Mind-set/Professional Skill	• Select and use appropriate tools and technologies for assisting in Android application configuration • Understand user needs to support user-friendly and accessible UI implementation • Assist in integrating messaging, location, and background features as per application scope • Follow best practices for scalable, efficient, and sustainable mobile application support • Participate in basic application testing to assess performance, security, and usability • Understand basic business concepts and market needs in mobile technology • Assist in standard workflows from configuration to deployment and post-release updates • Apply sustainable practices to minimize resource usage and	The role of Android Application Technician – Telecom Devices aligns with NSQF Level 4 by enabling individuals to carry out well-defined tasks using basic technical knowledge, limited autonomy, and supervision. It develops employment readiness through practical skills and supports entrepreneurial thinking by building awareness of market trends and sustainability in mobile applications.	4.0

	environmental impact - Communicate effectively and collaborate with developers, testers, and stakeholders - Stay updated on trends in mobile apps and telecom VAS to identify opportunities - Manage assigned tasks within defined project timelines and support risk handling - Build awareness of entrepreneurial opportunities in mobile application services		
Broad Learning Outcomes/Core Skill	The Broad Learning Outcomes/Core Skill are: - Assist in setting up and managing the Android application environment - Support implementation of user interfaces and integration of basic features and services - Communicate technical inputs clearly within a team - Follow testing procedures to ensure performance, security, and usability - Apply sustainable coding practices to reduce resource use and environmental impact - Assist in data, messaging, and location-based service integration - Support publishing of Android applications as per platform guidelines - Understand user needs and contribute to user-centric design - Adhere to safety, quality, and environmental compliance standards in application tasks	The Android Application Technician – Telecom Devices role aligns with NSQF Level 4, requiring application of factual knowledge and practical skills in a structured work setting. The individual performs tasks with limited autonomy, supports routine operations, and contributes to team-based processes in Android application configuration, testing, and deployment, while adhering to industry and sustainability standards.	4.0
Responsibility	The responsibilities are: - Assist in setting up and configuring Android projects and environments - Assist in the implementation of user interfaces using standard tools and templates - Help manage and retrieve application data using defined storage methods - Assist in integrating messaging, networking, and	The role of Android Application Technician – Telecom Devices at NSQF Level 4 involves performing clearly defined technical tasks under supervision, applying practical knowledge and limited judgment in a familiar work environment. The individual supports structured processes in Android application setup, feature integration, testing, publishing, and sustainability practices.	4.0

	location-based services • Assist in background service setup for routine tasks • Execute predefined test cases to ensure application functionality and security • Assist in preparing and uploading applications for publishing on app platforms • Follow sustainable coding practices to reduce power, data, and resource usage • Apply environmentally responsible UI/UX practices in application configuration • Adhere to safety, quality, and environmental guidelines in all development activities		
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Annexure 2: Tools and Equipment (Lab Set-Up)

List of Tools and Equipment

Batch Size: 30

S. No.	Tool / Equipment Name	Specification	Quantity for specified Batch size
1.	Sample Smartphones (For App Deployment & Testing)	Pieces	6
2.	Android Development Kit	Pieces	1
3.	Integrated Development Environment (IDE) (e.g., Android Studio)	Pieces	1
4.	Android Devices/Emulators	Pieces	1
5.	Version Control System (VCS) (e.g., Git, GitHub)	Pieces	1
6.	Network and Internet Access	Pieces	1
7.	Debugging and Testing Tools (e.g., ADB, Logcat)	Pieces	1
8.	Performance Optimization Tools (e.g., Profiler)	Pieces	1
9.	Design and Wireframing Software (e.g., Figma)	Pieces	1

Classroom Aids

The aids required to conduct sessions in the classroom are:

1. Whiteboard
2. Projector
3. Computer/Laptop
4. Chairs
5. Tables
6. Whiteboard marker

7. Duster

Annexure 3: Industry Validations Summary

Provide the summary information of all the industry validations in table. This is not required for OEM qualifications.

S. No	Organization Name	Representative Name	Designation	Contact Address	Contact Phone No	E-mail ID	LinkedIn Profile (if available)
1.	Ibus Network and infrastructure Pvt.Ltd.	TK Narayanan	Deputy General Manager Commercial	7th Floor Tower B, Vatika Towers Golf Crouse Road Sector 54 Gurugram, Haryana India 122011		tk.narayanan@ibusnetworks.com	
2.	ICAI Computer & IT Skill Enhancement Institute (ICSE)	Er. Kamaljeet Kumar Sharma	Managing Director	#2266 (Site No. 24), Phase 7/Sector 61, S.A.S Nagar (Mohali) 160062, Punjab (India)		contact@icseinstitute.com kksmhl@gmail.com	
3.	JRS Global Networks Pvt.Ltd.	Arvind Yadav	Asst. Account Manager Telecom	A 22, Sector-65 Noida, UP-201307		account3@jrsgl.com	
4.	Expert Consultant & Coach for Telecom Fibre Optics, FTTx and Broadband	Dr. Anuj Shrivastava	Ex Executive Director Indian Telecom Services	Ghaziabad, UP		srianujkumar@gmail.com	
5.	Jio Platforms Limited (Jio)	Abhijay Singh Sisodia	Senior Manager	Office-101, Saffron, Nr.Centre Point, Panchwati 5 Rasta, Ambawadi, Ahmedabad-380006 Gujarat		abhijay.sisodia@ril.com	
6.	Vodafone India Shared Service Private Limited	Manmohan Sharma	Deputy General Manager	0-4th floor, Cluster D, Wing 3, EON Free Zone, Kharadi, Pune, Maharashtra 411014		manmohan.sharma@vodafone.com	
7.	Teoco	Naman Khosla Abhijay Singh Sisodia	Technical Consultant	Infotech Center -6th floor, 14/2 Old Delhi Gurgaon Road, Dundaheera, Gurgaon – 122016, India		naman.khosla@teoco.com	

8.	Global Logic	Rashid Muhammad	Associate Manager	Plot No.7, Oxygen Business Park SEZ, Tower, 3, Noida-Greater Noida Expy, Sector 144, Noida, Uttar Pradesh 201304	rashid.muhammad@globallogic.com	
9.	Mahendra Technical Institute	Mahendra Brmukh	Chairman and Managing Director	1st Floor, 3/B M B Classic, Telco Road, Near Kailash Dairy, Chinchwad Station, Pune – 411019 Maharashtra, India	info.mtipune@gmail.com	
10.	Amazon	Anshul Gupta	Program Manager	Bangalore	anshigu@amazon.com	
11.	Stealth Mode Startup Company	Avadh Gupta	Founder, Co-Founder & Investor	Pune	avadhmac@gmail.com	
12.	Ranitronics	Yakama Vijayasree Kumar	Founder & Technical Consultant	Villa 302, Namaha Rhythm, Road No. 1, Kavya Avenue, Bachupally, Hyderabad – 500090, Telangana	info@ranitronics.com	
13	Eco Works	Deepali Sinha Khetriwal	Founder & CEO	C-601, Kalpataru Regency Phase 1, Kalyani Nagar, Pune 411006	deepali@ecowork.international	
14	Himachal Futuristic Communications Limited (HFCL)	Amit Agarwal	VP PLM	8, Commercial Complex, Masjid Moth, Greater Kailash - 11, New Delhi - 110048, India	amit.agarwal@hfcl.com	
15	Tata Communication	Alka Asthana	Head of Regulatory Affairs	Next Gen Tower Outer Ring Road, GK-1, New Delhi – 110048	alka.asthanatelecom@gmail.com	
16	Reckitt Benckiser	Sachin Sharma	Demand Manager	Udyog Vihar, Phase V, Gurgaon, Haryana	sachin.sharma@rb.com	
17	Sycamore Informatics	Rahul Kumar Kaushik	Product Manager	No. 6, 2nd Floor, 2nd Main, Arekere, Off Bannerghatta Road, Bangalore 560076	rahul.kaushik@sycamoreinformatics.com	
18	Nokia	Saurabh Singh	Software Quality Engineer	L5 and L6 Building Manyata Embassy Business Park	saurabh.9.singh@nokia.com	

				Outer Ring Road, Nagawara 560045			
19	Edge Telecom	Arun Singh	Senior Project Engineer	9th floor, ILD Trade Centre, 904, main, Badshahpur Sohna Rd Hwy, near Subhash Chowk, Gurugram, Haryana 122018		arun.singh@edgetelecom.org	
20	Conduent	Prince Jain	Sr. Business Analyst	Plot No. 20, Candor Tech Space, Noida 201304		prince.jain@conduent.com	
21	Artificial Intelligence Technologies	Rohit Kumar Sharma	Manager – Development	A-21, sector 4, Block A, Kailash Colony, Greater Kailash, New Delhi,		rohit.sharma@aituniversal.com	
22	Ecom Express.in	Shekhar Poswal	Senior QA L1	10 th Floor, Ambience Corporate Tower II, Ambience Island, Gurugram 122001		Shekhar.p@ecomexpress.in	
23	Paarminder Electronics Process Consultancy	Paarminder Singh	Consultant	New Delhi		singhpaarminder@gmail.com	
24	Senryaku Consulting	Udit Kaushik	Co-founder	Senryaku Management Private Limited Address: UTC031, DLF The Ultima, Sector 81, Gurugram, HR 122004		udit.kau@gmail.com	
25	Sopra Steria	Rikan Singh Tomar	Team Leader	Plot No. 20 & 21, Seaview Special Economic Zone, Building 4, Sector 135, Noida, Uttar Pradesh 201304		rikan.singh@soprasteria.com	

Annexure 4: Training & Employment Details

Training and Employment Projections:

Year	Total Candidates	Women	People with Disability
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	Estimated Training #	Estimated Employment Opportunities	Estimated Training #	Estimated Employment Opportunities	Estimated Training #	Estimated Employment Opportunities
2025	465	325	24	24	24	24
2026	465	325	24	24	24	24
2027	630	442	30	30	30	30

Data to be provided year-wise for next 3 years

Training, Assessment, Certification, and Placement Data for previous versions of qualifications:

Qualification Version	Year	Total Candidates				Women				People with Disability			
		Trained	Assessed	Certified	Placed	Trained	Assessed	Certified	Placed	Trained	Assessed	Certified	Placed
5.0	Dec 2021 to March 2022	124	96	96									
5.0	April 2022 to March 2023	-	-	-									
5.0	April 2023 to March 2024	-	-	-									
5.0	April 2024 to March 2025	1120	108	108									

Applicable for revised qualifications only, data to be provided year-wise for past 3 years.

List Schemes in which the previous version of Qualification was implemented:

- 1.
- 2.

Content availability for previous versions of qualifications:

☐ Participant Handbook ☐ Facilitator Guide ☐ Digital Content ☐ Qualification Handbook ☐ Any Other:

Languages in which Content is available:

Annexure 5: 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	LMS Portal- TSSC Telco Learning Portal will be utilized with online content/virtual lectures (Telcolearning.com)	100:100
2	☒ Imparting Soft Skills, Life Skills, and Employability Skills /Mentorship to Learners	LMS Portal- TSSC Telco Learning Portal will be utilized with online content/virtual lectures (Telcolearning.com)	100:100
3	☐ Showing Practical Demonstrations to the learners		
4	☐ Imparting Practical Hands-on Skills/ Lab Work/ workshop/ shop floor training		
5	☐ Tutorials/ Assignments/ Drill/ Practice		
6	☐ Proctored Monitoring/ Assessment/ Evaluation/ Examinations		
7	☐ On the Job Training (OJT)/ Project Work Internship/ Apprenticeship Training		

Annexure 6: 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
TEL/N2300: Assist in Configuring Android Development Environment and User Interface for Telecom Devices	<i>Assist in setting up Android application development environment</i>	10	13	-	4
	PC1.identify commonly used tools, SDKs, and software required for Android setup	3	3	-	1
	PC2.assist in installing and configuring the Java Development Kit (JDK), Integrated Development Environment (IDE), and Android SDK under supervision	2	4	-	1
	PC3.set up Android Virtual Devices (AVDs) and real-device debugging for basic application testing	2	2	-	1
	PC4.install required plugins, libraries, and dependencies with guidance from the supervisor	3	4	-	1

	<i>Assist in creating and configuring an Android project</i>	8	14	-	4
	PC5.interpret project requirements including Android OS version, minimum SDK level, and package structure	2	3	-	1
	PC6.assist in creating new Android projects in the IDE using predefined project templates	2	3	-	1
	PC7.configure basic project files including source directories, manifests, Gradle scripts, and resource folders	2	4	-	1
	PC8.apply basic logging and debugging mechanisms with assistance from senior team members	2	4	-	1
	<i>Assist in configuring the Android application user interface</i>	12	23		12
	PC9.assist in configuring user interface components using XML and built-in layout editors	1	2	-	1
	PC10.add predefined UI elements like buttons, text fields, lists, and images	1	2	-	1
	PC11.implement basic navigation, e.g. menus, toolbars, using predefined intents between activities	2	4	-	2
	PC12.apply standard UI themes and styles provided by the Android SDK	1	2	-	1
	PC13.assist in incorporating media elements such as images, audio, video, and enable camera functionality in the app	2	3	-	2
	PC14.assist in implementing location services, maps, and GPS-based functionalities as per application needs	1	2	-	1
	PC15.support event-handling for common interactions such as clicks or gestures	1	2	-	1
	PC16.assist in testing the interface on emulators and real devices for responsiveness and usability	2	4	-	2
	PC17.report any identified issues related to the interface or layout for resolution by senior developers	1	2	-	1
	Total Marks	30	50	-	20
TEL/N2301: Assist in Configuring Value Added Services (VAS) in Android Applications for Telecom Devices	<i>Assist in managing data within Android applications</i>	9	15	-	5
	PC1.assist in applying basic data storage methods such as SharedPreferences and Room Database	2	2	-	0.5
	PC2.assist in updating user preferences and retrieving stored data under supervision	1	3	-	0.5

PC3.support storing and accessing data using internal storage, external storage (SD Card), cloud-based solutions (Firebase, AWS, or Azure), and encrypted storage mechanisms	3	3	-	1
PC4.assist in using Structured Query Language (SQL) commands to create, read, update, and delete (CRUD) database records	1	2	-	1
PC5.configure predefined databases (e.g., SQLite) following provided guidelines	1	3	-	1
PC6.assist in implementing content providers to enable data sharing between apps	1	2	-	1
<i>Assist in messaging and networking service integration</i>	<i>8</i>	<i>15</i>		<i>5</i>
PC7.assist in configuring messaging functionalities using tools like Firebase Cloud Messaging (FCM)	2	3	-	0.5
PC8.assist in implementing SMS-based tasks using system tools such as BroadcastReceivers and Intents	1	2	-	0.5
PC9.configure sample email and HTTP connections under supervision using Retrofit or similar libraries	2	3	-	1
PC10.assist in integrating application functionalities with Bluetooth for file sharing, device pairing, and data sharing	1	2	-	1
PC11.assist in configuring RESTful APIs using standard methods and sample code	1	2	-	1
12.follow guidance to implement efficient data requests using synchronous and asynchronous calls, and apply basic caching techniques to support optimal resource usage	1	3	-	1
<i>Assist in configuring location-based services</i>	<i>5</i>	<i>10</i>	<i>-</i>	<i>5</i>
PC13.assist in setting up Google Maps API and configure location settings	1	1	-	1
PC14.assist in displaying maps and placing basic location markers	1	2	-	1
PC15.assist in geocoding activities using pre-built tools or utilities	1	2	-	1
PC16.configure GPS settings and Fused Location Provider integration as per given instructions	1	2	-	1
PC17.test and report location-based service functionality across sample conditions	1	3	-	1
<i>Assist in setup and monitoring of background Android services</i>	<i>8</i>	<i>10</i>	<i>-</i>	<i>5</i>
PC18.identify basic service types and when to use them (foreground, background, bound)	2	2	-	0.5

	PC19.assist in implementing background tasks using WorkManager or JobScheduler under supervision	1	2	-	0.5
	PC20.follow set procedures for recurring tasks and monitor performance impact	2	2	-	1
	PC21.assist in simple data sharing between activities and services	1	1	-	1
	PC22.assist in applying memory management practices to reduce leaks or slowdowns	1	1	-	1
	PC23.assist in updating UI from background services using standard tools such as ViewModel or LiveData	1	2	-	1
	Total Marks	30	50	-	20
TEL/N2302: Assist in Testing and Publishing Android Applications for Telecom Devices	<i>Assist in testing and validating Android applications</i>	<i>18</i>	<i>28</i>		<i>14</i>
	PC1.select appropriate testing types (e.g., functional, UI, compatibility) for different application features under guidance	2	3	-	2
	PC2.assist in executing predefined test cases and test scripts, like functional, usability, and regression testing	2	3	-	1
	PC3.assist in conducting compatibility testing across Android versions, screen sizes, and devices	2	4	-	3
	PC4.conduct basic network-related testing using guided tools or checklists	1	3	-	1
	PC5.assist in UI/UX testing based on standard layout and accessibility guidelines	2	3	-	1
	PC6.follow predefined checklists to verify app behavior and security settings	2	3	-	3
	PC7.document observed defects and coordinate with the development team for resolution	3	3	-	1
	PC8.assist in running static/dynamic security tests using basic tools and share findings	2	3	-	1
	PC9.assist in collecting testing data and logs for further analysis by senior QA team	2	3	-	1
	<i>Assist in publishing of Android applications</i>	<i>12</i>	<i>22</i>	<i>-</i>	<i>6</i>
	PC10.assist in verifying that the application meets the basic criteria for Google Play Store release	2	3	-	1
	PC11.assist in tasks related to versioning, signing, and packaging applications under supervision	3	4	-	2
	PC12.fill in Play Store or internal app store metadata forms as per provided guidelines	2	4	-	1

	PC13.upload application builds to distribution platforms following supervisor’s instructions	3	5	-	1
	PC14.monitor crash reports and user feedback using dashboard tools and report issues for iterative improvements	2	6	-	1
	Total Marks	30	50	-	20
TEL/N9110: Follow sustainability practices in telecom production and assembly line processes	<i>Adopt sustainable coding practices</i>	<i>6</i>	<i>8</i>	<i>-</i>	<i>4</i>
	PC1. write optimized and efficient code to reduce processing power and memory usage	2	3	-	1
	PC2. use energy-efficient algorithms and data structures	2	2	-	2
	PC3. minimize redundant code and remove unnecessary computations	2	3	-	1
	<i>Optimize application performance</i>	<i>4</i>	<i>7</i>	<i>-</i>	<i>3</i>
	PC4. implement efficient resource management to reduce battery consumption	1	3	-	1
	PC5. optimize background processes and data retrieval mechanisms	2	1	-	1
	PC6. reduce application size by eliminating redundant assets and compressing files	1	3	-	1
	<i>Reduce network and data usage</i>	<i>5</i>	<i>9</i>	<i>-</i>	<i>4</i>
	PC7. optimize API calls and minimize data transfers	2	3	-	1
	PC8. implement caching mechanisms to reduce redundant network requests	1	3	-	2
	PC9. use efficient data formats (e.g. JSON over XML) for minimal processing load	2	3	-	1
	<i>Comply with environmental standards</i>	<i>4</i>	<i>8</i>	<i>-</i>	<i>3</i>
	PC10. follow relevant environmental regulations and guidelines related to digital sustainability	1	3	-	1
	PC11. use software development frameworks and tools that support sustainability	1	2	-	1
	PC12. implement best practices recommended by green software engineering standards	2	3	-	1
	<i>Promote sustainable UI/UX design</i>	<i>6</i>	<i>9</i>	<i>-</i>	<i>3</i>
	PC13. implement dark mode and adaptive themes to reduce screen energy consumption	2	3	-	1

	PC14. optimize animations and visual effects to minimize processing load	2	3	-	1
	PC15. provide users with settings to customize app performance for energy efficiency	2	3	-	1
	<i>Follow sustainable development practices</i>	5	9	-	3
	PC16. use cloud computing solutions that operate on renewable energy sources	1	3	-	1
	PC17. adopt remote work and digital collaboration tools to reduce carbon footprint	2	3	-	1
	PC18. reuse existing components and libraries to minimize waste	2	3	-	1
	Total Marks	30	50	-	20
DGT/VSQ/N0101: Employability Skills (30 Hours)	<i>Introduction to Employability Skills</i>	1	1	-	-
	PC1. understand the significance of employability skills in meeting the job requirements	-	-	-	-
	<i>Constitutional values – Citizenship</i>	1	1	-	-
	PC2. identify constitutional values, civic rights, duties, personal values and ethics and environmentally sustainable practices	-	-	-	-
	<i>Becoming a Professional in the 21st Century</i>	1	1	-	-
	PC3. explain 21st Century Skills such as Self- Awareness, Behavior Skills, Positive attitude, self-motivation, problem-solving, creative thinking, time management, social and cultural awareness, emotional awareness, continuous learning mindset etc.	-	-	-	-
	<i>Basic English Skills</i>	2	3	-	-
	PC4. speak with others using some basic English phrases or sentences	-	-	-	-
	<i>Communication Skills</i>	1	1	-	-
	PC5. follow good manners while communicating with others	-	-	-	-
	PC6. work with others in a team	-	-	-	-
	<i>Diversity & Inclusion</i>	1	1	-	-
	PC7. communicate and behave appropriately with all genders and PwD	-	-	-	-
	PC8. report any issues related to sexual harassment	-	-	-	-

	<i>Financial and Legal Literacy</i>	3	4	-	-
	PC9. use various financial products and services safely and securely	-	-	-	-
	PC10. calculate income, expenses, savings etc.	-	-	-	-
	PC11. approach the concerned authorities for any exploitation as per legal rights and laws	-	-	-	-
	<i>Essential Digital Skills</i>	4	6	-	-
	PC12. operate digital devices and use its features and applications securely and safely	-	-	-	-
	PC13. use internet and social media platforms securely and safely	-	-	-	-
	<i>Entrepreneurship</i>	3	5	-	-
	PC14. identify and assess opportunities for potential business	-	-	-	-
	PC15. identify sources for arranging money and associated financial and legal challenges	-	-	-	-
	<i>Customer Service</i>	2	2	-	-
	PC16. identify different types of customers	-	-	-	-
	PC17. identify customer needs and address them appropriately	-	-	-	-
	PC18. follow appropriate hygiene and grooming standards	-	-	-	-
	<i>Getting ready for apprenticeship & Jobs</i>	1	3	-	-
	PC19. create a basic biodata	-	-	-	-
	PC20. search for suitable jobs and apply	-	-	-	-
	PC21. identify and register apprenticeship opportunities as per requirement	-	-	-	-
	Total Marks	20	30	-	-
Grand Total		140	230	-	80

Annexure 7: 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 assigned to the assessment agencies for conducting the assessment on SDSM/SIP or email
- Assessment agencies send the assessment confirmation to VTP/TC looping SSC
- Assessment agency deploys the ToA certified Assessor for executing the assessment
- SSC monitors the assessment process & records

2. Testing Environment:

- Confirm that the centre is available at the same address as mentioned on SDMS or SIP
- Check the duration of the training.
- Check the Assessment Start and End time to be as 10 a.m. and 5 p.m.
- If the batch size is more than 30, then there should be 2 Assessors.
- Check that the allotted time to the candidates to complete Theory & Practical Assessment is correct.
- Check the mode of assessment—Online (TAB/Computer) or Offline (OMR/PP).
- Confirm the number of TABs on the ground are correct to execute the Assessment smoothly.
- Check the availability of the Lab Equipment for the particular Job Role.

3. Assessment Quality Assurance levels / Framework:

- Question papers created by the Subject Matter Experts (SME)
- Question papers created by the SME verified by the other subject Matter Experts
- Questions are mapped with NOS and PC
- Question papers are prepared considering that levels 1 to 3 are for the unskilled & semi-skilled individuals, and level 4 and above are for the skilled, supervisor & higher management
- Assessor must be ToA certified & trainer must be ToT Certified
- Assessment agency must follow the assessment guidelines to conduct the assessment

4. Types of evidence or evidence-gathering protocol:

- Time-stamped & geotagged reporting of the assessor from assessment location
- Center photographs with signboards and scheme specific branding
- Biometric or manual attendance sheet (stamped by TP) of the trainees during the training period
- Time-stamped & geotagged assessment (Theory + Viva + Practical) photographs & videos

5. Method of verification or validation:

- Surprise visit to the assessment location
- Random audit of the batch
- Random audit of any candidate

6. Method for assessment documentation, archiving, and access

- Hard copies of the documents are stored
- Soft copies of the documents & photographs of the assessment are uploaded / accessed from Cloud Storage
- Soft copies of the documents & photographs of the assessment are stored in the Hard Drives

The trainee will be tested for the acquired skill, knowledge and attitude through formative/ summative assessment at the end of the course and as this NOS and MC is adopted across sectors and qualifications, the respective AB can conduct the assessments as per their requirements.

Annexure 8: Acronym and Glossary

Acronym

Acronym	Description
AA	Assessment Agency
AB	Awarding Body
ISCO	International Standard Classification of Occupations
NCO	National Classification of Occupations
NCrF	National Credit Framework
NOS	National Occupational Standard(s)
NQR	National Qualification Register
NSQF	National Skills Qualifications Framework
OJT	On the Job Training
TSSC	Telecom Sector Skill Council
TRAI	Telecom Regulatory Authority of India
AVDs	Android Virtual Devices
JDK	Java Development Kit
IDE	Integrated Development Environment
OOP	Object-Oriented Programming
SDK	Software Development Kit
SQL	Structured Query Language
API	Application Programming Interface
FCM	Firestore Cloud Messaging
GPS	Global Positioning System
AIDL	Android Interface Definition Language

UI/UX	User Interface/User Experience
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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.
Long Term Training	Long-term skilling means any vocational training program undertaken for a year and above. https://ncvet.gov.in/sites/default/files/NCVET.pdf