

Qualification Pack



Android Application Technician - Telecom Devices

QP Code: TEL/Q2300

Version: 6.0

NSQF Level: 4

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TEL/Q2300: Android Application Technician - Telecom Devices

Brief Job Description

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.

Personal Attributes

The individual should be detail-oriented, a good communicator, and a quick learner, capable of following standard procedures and technical instructions. The person should also have basic problem-solving skills and be able to work collaboratively under supervision.

Applicable National Occupational Standards (NOS)

Compulsory NOS:

1. [TEL/N2300: Assist in Configuring Android Development Environment and User Interface for Telecom Devices](#)
2. [TEL/N2301: Assist in Configuring Value Added Services \(VAS\) in Android Applications for Telecom Devices](#)
3. [TEL/N2302: Assist in Testing and Publishing Android Applications for Telecom Devices](#)
4. [TEL/N9110: Follow sustainability practices in the development of mobile applications](#)
5. [DGT/VSQ/N0101: Employability Skills \(30 Hours\)](#)

Qualification Pack (QP) Parameters

Sector	Telecom
Sub-Sector	Handset
Occupation	Terminal Equipment Application Developer
Country	India
NSQF Level	4

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Credits	17
Aligned to NCO/ISCO/ISIC Code	NCO -2015/2153.0101
Minimum Educational Qualification & Experience	12th grade Pass OR Completed 2nd year of the 3-year diploma after 10 (in Computer Engineering/ Software Engineering Information Technology/ Mobile App Development) OR 10th grade pass with 3 Years of experience in Telecom/IT/Programming languages OR Previous relevant Qualification of NSQF Level (3.0) with 3 Years of experience in Telecom/IT/Programming languages OR Previous relevant Qualification of NSQF Level (3.5) with 1.5 years of experience in Telecom/IT/Programming languages
Minimum Level of Education for Training in School	10th Class
Pre-Requisite License or Training	NA
Minimum Job Entry Age	17 Years
Last Reviewed On	NA
Next Review Date	30/04/2028
NSQC Approval Date	08/05/2025
Version	6.0
Reference code on NQR	QG-04-TL-04073-2025-V2-TSSC
NQR Version	2

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TEL/N2300: Assist in Configuring Android Development Environment and User Interface for Telecom Devices

Description

This unit focuses on assisting in setting up the Android application environment and configuring basic user interface components using predefined templates and tools. The technician performs these tasks under the guidance of senior developers or supervisors to ensure functional Android application deployment on telecom devices.

Scope

The scope covers the following :

- Assist in setting up Android application development environment
- Assist in creating and configuring an Android project
- Assist in configuring the Android application user interface

Elements and Performance Criteria

Assist in setting up Android application development environment

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

- PC1.** identify commonly used tools, SDKs, and software required for Android setup
- PC2.** assist in installing and configuring the Java Development Kit (JDK), Integrated Development Environment (IDE), and Android SDK under supervision
- PC3.** set up Android Virtual Devices (AVDs) and real-device debugging for basic application testing
- PC4.** install required plugins, libraries, and dependencies with guidance from the supervisor

Assist in creating and configuring an Android project

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

- PC5.** interpret project requirements including Android OS version, minimum SDK level, and package structure
- PC6.** assist in creating new Android projects in the IDE using predefined project templates
- PC7.** configure basic project files including source directories, manifests, Gradle scripts, and resource folders
- PC8.** apply basic logging and debugging mechanisms with assistance from senior team members

Assist in configuring the Android application user interface

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

- PC9.** assist in configuring user interface components using XML and built-in layout editors
- PC10.** add predefined UI elements like buttons, text fields, lists, and images
- PC11.** implement basic navigation, e.g. menus, toolbars, using predefined intents between activities
- PC12.** apply standard UI themes and styles provided by the Android SDK
- PC13.** assist in incorporating media elements such as images, audio, video, and enable camera functionality in the app

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- PC14.** assist in implementing location services, maps, and GPS-based functionalities as per application needs
- PC15.** support event-handling for common interactions such as clicks or gestures
- PC16.** assist in testing the interface on emulators and real devices for responsiveness and usability
- PC17.** report any identified issues related to the interface or layout for resolution by senior developers

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** commonly used mobile operating systems and Android architecture
- KU2.** basic setup process for JDK, Android Studio, and SDK Manager
- KU3.** Android project structure and the purpose of key files like AndroidManifest.xml and Gradle
- KU4.** types of UI layouts (ConstraintLayout, LinearLayout, RelativeLayout) and when to use them
- KU5.** basic application components such as Activities and Intents
- KU6.** fundamentals of UI navigation and state management
- KU7.** how to apply themes and styles using standard tools
- KU8.** fundamentals of Object-Oriented Programming (OOP) in Java/Kotlin, including threading and networking
- KU9.** how to handle user input through built-in event listeners
- KU10.** the basics of performance optimization techniques such as lazy loading, efficient memory management, and battery-efficient coding
- KU11.** the purpose of real-device testing and use of AVDs
- KU12.** basic principles of debugging and error logging in Android

Generic Skills (GS)

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

- GS1.** read and follow setup guides, manuals, and checklists
- GS2.** follow instructions and document configuration steps accurately
- GS3.** communicate effectively with senior developers and team members to clarify tasks
- GS4.** follow structured workflows for project setup and UI configuration
- GS5.** use problem-solving techniques to identify configuration or layout issues
- GS6.** adapt to new versions of IDEs, SDK tools, and layout systems
- GS7.** use version control systems such as Git for syncing project files
- GS8.** support team members during testing and review activities

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Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<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

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Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
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
NOS Total	30	50	-	20

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National Occupational Standards (NOS) Parameters

NOS Code	TEL/N2300
NOS Name	Assist in Configuring Android Development Environment and User Interface for Telecom Devices
Sector	Telecom
Sub-Sector	Handset
Occupation	Terminal Equipment Application Developer
NSQF Level	4
Credits	6
Version	5.0
Last Reviewed Date	08/05/2025
Next Review Date	30/04/2028
NSQC Clearance Date	08/05/2025

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TEL/N2301: Assist in Configuring Value Added Services (VAS) in Android Applications for Telecom Devices

Description

This unit focuses on assisting in the configuration and integration of Value-Added Services (VAS) in Android applications for telecom devices. It includes supporting activities related to messaging, data storage, networking, location-based services, and background service setup.

Scope

The scope covers the following :

- Assist in managing data within Android applications
- Assist in messaging and networking service integration
- Assist in configuring location-based services
- Assist in setup and monitoring of background Android services

Elements and Performance Criteria

Assist in managing data within Android applications

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

- PC1.** assist in applying basic data storage methods such as SharedPreferences and Room Database
- PC2.** assist in updating user preferences and retrieving stored data under supervision
- PC3.** support storing and accessing data using internal storage, external storage (SD Card), cloud-based solutions (Firebase, AWS, or Azure), and encrypted storage mechanisms
- PC4.** assist in using Structured Query Language (SQL) commands to create, read, update, and delete (CRUD) database records
- PC5.** configure predefined databases (e.g., SQLite) following provided guidelines
- PC6.** assist in implementing content providers to enable data sharing between apps

Assist in messaging and networking service integration

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

- PC7.** assist in configuring messaging functionalities using tools like Firebase Cloud Messaging (FCM)
- PC8.** assist in implementing SMS-based tasks using system tools such as BroadcastReceivers and Intents
- PC9.** configure sample email and HTTP connections under supervision using Retrofit or similar libraries
- PC10.** assist in integrating application functionalities with Bluetooth for file sharing, device pairing, and data sharing
- PC11.** assist in configuring RESTful APIs using standard methods and sample code
- PC12.** follow guidance to implement efficient data requests using synchronous and asynchronous calls, and apply basic caching techniques to support optimal resource usage

Assist in configuring location-based services

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

- PC13.** assist in setting up Google Maps API and configure location settings
- PC14.** assist in setting up Google Maps API and configure location settings
- PC15.** assist in geocoding activities using pre-built tools or utilities
- PC16.** configure GPS settings and Fused Location Provider integration as per given instructions
- PC17.** test and report location-based service functionality across sample conditions

Assist in setup and monitoring of background Android services

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

- PC18.** identify basic service types and when to use them (foreground, background, bound)
- PC19.** assist in implementing background tasks using WorkManager or JobScheduler under supervision
- PC20.** follow set procedures for recurring tasks and monitor performance impact
- PC21.** assist in simple data sharing between activities and services
- PC22.** assist in applying memory management practices to reduce leaks or slowdowns
- PC23.** assist in updating UI from background services using standard tools such as ViewModel or LiveData

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** Android application lifecycle, including Activity, Fragment, and Service lifecycle
- KU2.** common data storage options in Android (SharedPreferences, Room, SQLite)
- KU3.** best practices for Android local data storage and cloud-based storage solutions
- KU4.** database management and indexing for performance optimization
- KU5.** basic structure and use of SQL commands
- KU6.** the purpose and functioning of content providers
- KU7.** messaging protocols and technologies, including SMS, MMS, and push notifications
- KU8.** fundamentals of Google Maps integration and location-based services
- KU9.** simple RESTful API request structure and network protocols
- KU10.** the principles of geocoding and reverse geocoding
- KU11.** fundamentals of background processing, including multi-threading, WorkManager, and JobScheduler
- KU12.** efficient resource management for network, storage, and memory optimization
- KU13.** security considerations in Android applications, including data encryption, authentication, and secure APIs

Generic Skills (GS)

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

- GS1.** read and understand setup instructions and developer documentation
- GS2.** follow structured instructions from developers for integration tasks

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- GS3.** communicate clearly with team members regarding technical tasks
- GS4.** log integration results and share observations with the supervisor
- GS5.** use tools like Android Studio, Logcat, and AVD for testing and debugging
- GS6.** apply basic problem-solving methods to resolve configuration errors
- GS7.** adapt to updated Android SDK tools, APIs, and documentation
- GS8.** follow guidelines related to secure application and data practices

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Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<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>	8	15	-	5
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

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Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC12. 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>	5	10	-	5
PC13. assist in setting up Google Maps API and configure location settings	1	1	-	1
PC14. assist in setting up Google Maps API and configure location settings	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>	8	10	-	5
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
NOS Total	30	50	-	20

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National Occupational Standards (NOS) Parameters

NOS Code	TEL/N2301
NOS Name	Assist in Configuring Value Added Services (VAS) in Android Applications for Telecom Devices
Sector	Telecom
Sub-Sector	Handset
Occupation	Terminal Equipment Application Developer
NSQF Level	4
Credits	5
Version	5.0
Last Reviewed Date	08/05/2025
Next Review Date	30/04/2028
NSQC Clearance Date	08/05/2025

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TEL/N2302: Assist in Testing and Publishing Android Applications for Telecom Devices

Description

This unit is about assisting in the testing and publishing of Android applications across telecom devices. It includes supporting functional and compatibility testing, executing test cases under supervision, reporting bugs, and helping in the app release process through app stores or internal platforms

Scope

The scope covers the following :

- Assist in testing and validating Android applications
- Assist in publishing Android applications

Elements and Performance Criteria

Assist in testing and validating Android applications

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

- PC1.** select appropriate testing types (e.g., functional, UI, compatibility) for different application features under guidance
- PC2.** assist in executing predefined test cases and test scripts, like functional, usability, and regression testing
- PC3.** assist in conducting compatibility testing across Android versions, screen sizes, and devices
- PC4.** conduct basic network-related testing using guided tools or checklists
- PC5.** assist in UI/UX testing based on standard layout and accessibility guidelines
- PC6.** follow predefined checklists to verify app behavior and security settings
- PC7.** document observed defects and coordinate with the development team for resolution
- PC8.** assist in running static/dynamic security tests using basic tools and share findings
- PC9.** assist in collecting testing data and logs for further analysis by senior QA team

Assist in publishing of Android applications

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

- PC10.** assist in verifying that the application meets the basic criteria for Google Play Store release
- PC11.** assist in tasks related to versioning, signing, and packaging applications under supervision
- PC12.** fill in Play Store or internal app store metadata forms as per provided guidelines
- PC13.** upload application builds to distribution platforms following supervisor's instructions
- PC14.** monitor crash reports and user feedback using dashboard tools and report issues for iterative improvements

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

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- KU1.** different types of mobile application testing (functional, compatibility, usability, performance, security)
- KU2.** basic use of Android testing tools such as Android Emulator, Logcat, and ADB
- KU3.** the importance of UI consistency and responsiveness across devices
- KU4.** performance metrics and benchmarks for application optimization
- KU5.** Android security policies, OWASP Mobile Security best practices, and GDPR compliance
- KU6.** the basics of debugging techniques, crash analytics, and log analysis for troubleshooting
- KU7.** Google Play Store licensing policies, and guidelines for application approval
- KU8.** fundamentals of Android services, background processing, and API integrations
- KU9.** network protocols, data handling, and optimization for mobile applications
- KU10.** continuous Integration (CI) and Continuous Deployment (CD) practices in application release
- KU11.** best practices for user experience (UX) design and accessibility compliance
- KU12.** how to use dashboards for post-release monitoring and reporting
- KU13.** role of version control and CI/CD tools in team-based deployment workflows

Generic Skills (GS)

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

- GS1.** read and follow test cases, QA documentation, and release notes
- GS2.** communicate observations and testing issues clearly to the team
- GS3.** use basic problem-solving skills to troubleshoot issues in a structured manner
- GS4.** manage time and tasks effectively when supporting multiple testing cycles
- GS5.** adapt to different Android versions and testing tools as instructed
- GS6.** use tools like spreadsheets or issue trackers (e.g., JIRA, Trello) to log results
- GS7.** maintain clarity and completeness in documenting results and feedback
- GS8.** maintain confidentiality of application features and user data
- GS9.** collaborate with cross-functional teams (developers, QA, release managers)
- GS10.** follow standard operating procedures and security practices consistently

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Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Assist in testing and validating Android applications</i>	18	28	-	14
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>	12	22	-	6
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

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Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
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
NOS Total	30	50	-	20

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National Occupational Standards (NOS) Parameters

NOS Code	TEL/N2302
NOS Name	Assist in Testing and Publishing Android Applications for Telecom Devices
Sector	Telecom
Sub-Sector	Handset
Occupation	Terminal Equipment Application Developer
NSQF Level	4
Credits	4
Version	5.0
Last Reviewed Date	08/05/2025
Next Review Date	30/04/2028
NSQC Clearance Date	08/05/2025

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TEL/N9110: Follow sustainability practices in the development of mobile applications

Description

This unit focuses on sustainability practices for mobile application development. It covers methods to reduce energy consumption, optimize resource utilization, and ensure compliance with environmental standards.

Scope

The scope covers the following :

- Adopt sustainable coding practices
- Optimize application performance
- Reduce network and data usage
- Comply with environmental standards
- Promote sustainable UI/UX design
- Follow sustainable development practices

Elements and Performance Criteria

Adopt sustainable coding practices

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

PC1. write optimized and efficient code to reduce processing power and memory usage

PC2. use energy-efficient algorithms and data structures

PC3. minimize redundant code and remove unnecessary computations

Optimize application performance

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

PC4. implement efficient resource management to reduce battery consumption

PC5. optimize background processes and data retrieval mechanisms

PC6. reduce application size by eliminating redundant assets and compressing files

Reduce network and data usage

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

PC7. optimize API calls and minimize data transfers

PC8. implement caching mechanisms to reduce redundant network requests

PC9. use efficient data formats (e.g. JSON over XML) for minimal processing load

Comply with environmental standards

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

PC10. follow relevant environmental regulations and guidelines related to digital sustainability

PC11. use software development frameworks and tools that support sustainability

PC12. implement best practices recommended by green software engineering standards

Promote sustainable UI/UX design

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

PC13. implement dark mode and adaptive themes to reduce screen energy consumption

PC14. optimize animations and visual effects to minimize processing load

PC15. provide users with settings to customize app performance for energy efficiency

Follow sustainable development practices

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

PC16. use cloud computing solutions that operate on renewable energy sources

PC17. adopt remote work and digital collaboration tools to reduce carbon footprint

PC18. reuse existing components and libraries to minimize waste

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

KU1. the importance of sustainable practices in mobile application development

KU2. the impact of digital applications on energy consumption and carbon footprint

KU3. environmental benefits of optimized and efficient mobile apps

KU4. the principles of green coding and sustainable software engineering

KU5. techniques for optimizing code and reducing computational overhead

KU6. best practices for power-efficient application development

KU7. the applicable environmental regulations for software development

KU8. industry best practices for eco-friendly mobile applications

KU9. role of organizations like the Green Software Foundation in sustainable app development

KU10. sustainable UI/UX design principles that reduce energy consumption

KU11. user experience optimization to enhance app efficiency

KU12. implementation of dark mode and power-saving features

KU13. the importance of green cloud computing solutions

KU14. methods for optimizing server-side performance

KU15. the impact of data storage and retrieval on environmental sustainability

KU16. use of energy profiling tools (e.g., Android Profiler, Apple Energy Log)

KU17. use of code optimization tools (e.g., Lint, SonarQube)

KU18. use of cloud platforms with sustainability features (e.g., AWS Green Cloud, Google Carbon-Free Cloud)

KU19. use of UI/UX design software supporting dark mode and adaptive themes (e.g., Figma, Adobe XD)

Generic Skills (GS)

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

GS1. identify inefficiencies in mobile applications and resolve them sustainably

GS2. optimize application components for minimal energy usage

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- GS3.** analyze energy consumption patterns in mobile applications
- GS4.** implement performance monitoring tools to track sustainability improvements
- GS5.** communicate sustainability goals to development teams
- GS6.** work collaboratively to ensure adherence to eco-friendly development practices
- GS7.** follow the latest sustainable development practices
- GS8.** implement new strategies for minimizing the environmental impact of applications

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Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Adopt sustainable coding practices</i>	6	8	-	4
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>	4	7	-	3
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>	5	9	-	4
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>	4	8	-	3
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>	6	9	-	3

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Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
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
NOS Total	30	50	-	20

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National Occupational Standards (NOS) Parameters

NOS Code	TEL/N9110
NOS Name	Follow sustainability practices in the development of mobile applications
Sector	Telecom
Sub-Sector	
Occupation	Generic
NSQF Level	4
Credits	1
Version	1.0
Last Reviewed Date	08/05/2025
Next Review Date	30/04/2028
NSQC Clearance Date	08/05/2025

Qualification Pack

DGT/VSQ/N0101: Employability Skills (30 Hours)

Description

This unit is about employability skills, Constitutional values, becoming a professional in the 21st Century, digital, financial, and legal literacy, diversity and Inclusion, English and communication skills, customer service, entrepreneurship, and apprenticeship, getting ready for jobs and career development.

Scope

The scope covers the following :

- Introduction to Employability Skills
- Constitutional values - Citizenship
- Becoming a Professional in the 21st Century
- Basic English Skills
- Communication Skills
- Diversity & Inclusion
- Financial and Legal Literacy
- Essential Digital Skills
- Entrepreneurship
- Customer Service
- Getting ready for Apprenticeship & Jobs

Elements and Performance Criteria

Introduction to Employability Skills

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

PC1. understand the significance of employability skills in meeting the job requirements

Constitutional values – Citizenship

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

PC2. identify constitutional values, civic rights, duties, personal values and ethics and environmentally sustainable practices

Becoming a Professional in the 21st Century

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

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.

Basic English Skills

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

PC4. speak with others using some basic English phrases or sentences

Communication Skills

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

PC5. follow good manners while communicating with others

PC6. work with others in a team

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Diversity & Inclusion

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

PC7. communicate and behave appropriately with all genders and PwD

PC8. report any issues related to sexual harassment

Financial and Legal Literacy

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

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

Essential Digital Skills

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

PC12. operate digital devices and use its features and applications securely and safely

PC13. use internet and social media platforms securely and safely

Entrepreneurship

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

PC14. identify and assess opportunities for potential business

PC15. identify sources for arranging money and associated financial and legal challenges

Customer Service

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

PC16. identify different types of customers

PC17. identify customer needs and address them appropriately

PC18. follow appropriate hygiene and grooming standards

Getting ready for apprenticeship & Jobs

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

PC19. create a basic biodata

PC20. search for suitable jobs and apply

PC21. identify and register apprenticeship opportunities as per requirement

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

KU1. need for employability skills

KU2. various constitutional and personal values

KU3. different environmentally sustainable practices and their importance

KU4. Twenty first (21st) century skills and their importance

KU5. how to use basic spoken English language

KU6. Do and dont of effective communication

KU7. inclusivity and its importance

KU8. different types of disabilities and appropriate communication and behaviour towards PwD

KU9. different types of financial products and services

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- KU10.** how to compute income and expenses
- KU11.** importance of maintaining safety and security in financial transactions
- KU12.** different legal rights and laws
- KU13.** how to operate digital devices and applications safely and securely
- KU14.** ways to identify business opportunities
- KU15.** types of customers and their needs
- KU16.** how to apply for a job and prepare for an interview
- KU17.** apprenticeship scheme and the process of registering on apprenticeship portal

Generic Skills (GS)

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

- GS1.** communicate effectively using appropriate language
- GS2.** behave politely and appropriately with all
- GS3.** perform basic calculations
- GS4.** solve problems effectively
- GS5.** be careful and attentive at work
- GS6.** use time effectively
- GS7.** maintain hygiene and sanitisation to avoid infection

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Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<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	3	-	-
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	-	-	-	-

Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
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	-	-	-	-
NOS Total	20	30	-	-

Qualification Pack

National Occupational Standards (NOS) Parameters

NOS Code	DGT/VSQ/N0101
NOS Name	Employability Skills (30 Hours)
Sector	Cross Sectoral
Sub-Sector	Professional Skills
Occupation	Employability
NSQF Level	2
Credits	1
Version	1.0
Last Reviewed Date	30/04/2025
Next Review Date	30/04/2028
NSQC Clearance Date	30/04/2025

Assessment Guidelines and Assessment Weightage

Assessment Guidelines

1. Criteria for assessment for each Qualification Pack will be created by the Sector Skill Council. Each Element/ Performance Criteria (PC) will be assigned marks proportional to its importance in NOS. SSC will also lay down proportion of marks for Theory and Skills Practical for each Element/ PC.
2. The assessment for the theory part will be based on knowledge bank of questions created by the SSC.
3. Assessment will be conducted for all compulsory NOS, and where applicable, on the selected elective/option NOS/set of NOS.
4. Individual assessment agencies will create unique question papers for theory part for each candidate at each examination/training center (as per assessment criteria below).
5. Individual assessment agencies will create unique evaluations for skill practical for every student at each examination/ training center based on these criteria.
6. To pass the Qualification Pack assessment, every trainee should score the Recommended Pass % aggregate for the QP.
7. In case of unsuccessful completion, the trainee may seek reassessment on the Qualification Pack.

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Minimum Aggregate Passing % at QP Level : 70

(Please note: Every Trainee should score a minimum aggregate passing percentage as specified above, to successfully clear the Qualification Pack assessment.)

Assessment Weightage

Compulsory NOS

National Occupational Standards	Theory Marks	Practical Marks	Project Marks	Viva Marks	Total Marks	Weightage
TEL/N2300.Assist in Configuring Android Development Environment and User Interface for Telecom Devices	30	50	-	20	100	30
TEL/N2301.Assist in Configuring Value Added Services (VAS) in Android Applications for Telecom Devices	30	50	-	20	100	25
TEL/N2302.Assist in Testing and Publishing Android Applications for Telecom Devices	30	50	-	20	100	25
TEL/N9110.Follow sustainability practices in the development of mobile applications	30	50	-	20	100	10
DGT/VSQ/N0101.Employability Skills (30 Hours)	20	30	-	-	50	10
Total	140	230	-	80	450	100

Qualification Pack

Acronyms

NOS	National Occupational Standard(s)
NSQF	National Skills Qualifications Framework
QP	Qualifications Pack
TVET	Technical and Vocational Education and Training
NCVET	National Council for Vocational Education and Training
QP	Qualification Pack
MC	Model Curriculum
NSQF	National Skills Qualification Framework
NSQC	National Skills Qualification Committee
NOS	National Occupational Standards
NCO	National Classification of Occupations
ES	Employability Skills
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	Firebase Cloud Messaging
GPS	Global Positioning System
AIDL	Android Interface Definition Language
UI/UX	User Interface/User Experience

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Glossary

Sector	Sector is a conglomeration of different business operations having similar business and interests. It may also be defined as a distinct subset of the economy whose components share similar characteristics and interests.
Sub-sector	Sub-sector is derived from a further breakdown based on the characteristics and interests of its components.
Occupation	Occupation is a set of job roles, which perform similar/ related set of functions in an industry.
Job role	Job role defines a unique set of functions that together form a unique employment opportunity in an organisation.
Occupational Standards (OS)	OS specify the standards of performance an individual must achieve when carrying out a function in the workplace, together with the Knowledge and Understanding (KU) they need to meet that standard consistently. Occupational Standards are applicable both in the Indian and global contexts.
Performance Criteria (PC)	Performance Criteria (PC) are statements that together specify the standard of performance required when carrying out a task.
National Occupational Standards (NOS)	NOS are occupational standards which apply uniquely in the Indian context.
Qualifications Pack (QP)	QP comprises the set of OS, together with the educational, training and other criteria required to perform a job role. A QP is assigned a unique qualifications pack code.
Unit Code	Unit code is a unique identifier for an Occupational Standard, which is denoted by an 'N'
Unit Title	Unit title gives a clear overall statement about what the incumbent should be able to do.
Description	Description gives a short summary of the unit content. This would be helpful to anyone searching on a database to verify that this is the appropriate OS they are looking for.
Scope	Scope is a set of statements specifying the range of variables that an individual may have to deal with in carrying out the function which have a critical impact on quality of performance required.

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Knowledge and Understanding (KU)	Knowledge and Understanding (KU) are statements which together specify the technical, generic, professional and organisational specific knowledge that an individual needs in order to perform to the required standard.
Organisational Context	Organisational context includes the way the organisation is structured and how it operates, including the extent of operative knowledge managers have of their relevant areas of responsibility.
Technical Knowledge	Technical knowledge is the specific knowledge needed to accomplish specific designated responsibilities.
Core Skills/ Generic Skills (GS)	Core skills or Generic Skills (GS) are a group of skills that are the key to learning and working in today's world. These skills are typically needed in any work environment in today's world. These skills are typically needed in any work environment. In the context of the OS, these include communication related skills that are applicable to most job roles.
Electives	Electives are NOS/set of NOS that are identified by the sector as contributive to specialization in a job role. There may be multiple electives within a QP for each specialized job role. Trainees must select at least one elective for the successful completion of a QP with Electives.
Options	Options are NOS/set of NOS that are identified by the sector as additional skills. There may be multiple options within a QP. It is not mandatory to select any of the options to complete a QP with Options.
Sector	Sector is a conglomeration of different business operations having similar business and interests. It may also be defined as a distinct subset of the economy whose components share similar characteristics and interests.
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Knowledge and Understanding (K)	Knowledge and Understanding (KU) are statements which together specify the technical, generic, professional and organisational specific knowledge that an individual needs in order to perform to the required standard.
Organisational Context	Organisational context includes the way the organisation is structured and how it operates, including the extent of operative knowledge managers have of their relevant areas of responsibility.
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