Project Name: OCN Software

Post code: 01

No. of Post(s): 2

Location: New Delhi

Roles and Responsibilities:

- Research & development of appropriate ML algorithms to analyze huge volumes of historical data, make predictive analysis and automation as per project requirements
- Identify appropriate data sets, data collection and data modeling
- Statistical analysis of big data sets to improve models.
- Keeping abreast with the latest development in AI/ML
- Design & Development of quality software to enhance software reusability & scalability
- Code reviews and Release management

Skills and Abilities:

- Experience of writing robust code in Python and R, NLP
- Familiarity with machine learning algorithms and use of Al/ML frameworks such as TensorFlow or Keras
- Working knowlege of NoSQL and RDBMS
- Knowledge of statistical & algorithmic models, fundamental mathematical concepts such as linear algebra and probability
- Knowledge of data structure & algorithms, object-oriented design principles and best practice patterns and code profiling.
- Familiarity with Linux environment for software development
- •Knowledge of Smart Energy Meter (SEM), Head-end System(HES) and Meter Data Management(MDM)
- Knowledge of developing ChatBot shall be an added advantage
- Excellent problem solving and debugging skills
- Proficient in software version maintenance tools such as Git, SVN
- Excellent communicator, team player who can work independently also

Minimum Qualifications:

• Min 65% in (10th, 12th and B.E/B.Tech in Computer Science & Engineering or equivalent degree from a recognized college/university).

Eliqibility Criteria:

Project Name: OCN Software

Post code: 02

No. of Post(s): 4

Location: New Delhi

Roles and Responsibilities:

- Identify and analysis of software requirements
- Design & Development of software modules using C/C++
- Design & Development of quality software to enhance software reusability & scalability
- Coding, Code reviews, unit testing and Release management Integration of Software modules & System Integration testing

Skills and Abilities:

- Must have knowledge of building application in Linux environment, Knowledge of Makefile
- In-depth understanding and working knowledge of C & C++
- Object oriented design using C++, understanding of OOP principles and design patterns
- ➤ In-depth knowledge of data structure & algorithms and it's application in software design & development
- Working knowledge of database management system
- Knowledge of code profiling
- ➤ Good understanding and knowledge of Linux IPCs, TCP/IP internals, network programming and concepts of networking devices
- Familiarity with system calls, wrapper functions and library routines
- Proficient in Software design & development in multi-threaded environment
- Knowledge and use of debugging tools for debugging of multithreaded application
- Knowledge of scripting languages like shell, Python
- Knowledge of building application for Packet Optical Transport Platform(POTP)/application for Broadcom Switches shall be an added advantage
- Excellent problem solving and debugging skills

- ➤ Proficient in software version maintenance tools such as Git, SVN or any other release management system
- > Excellent problem solving and debugging skills
- Familiarity with continuous integration/continuous deployment, Testing & Integration of software modules. Excellent communicator, team player who can work independently also

Minimum Qualifications:

• Min 65% in (10th, 12th and B.E/B.Tech in Computer Science & Engineering or equivalent degree from a recognized college/university).

Eligibility Criteria:

• (-3 years of professional	work experience	e post qualification	n. Preference	will be g	iven to
G/	TE qualifiedcandidates.	•				

Project Name: OCN Software

Post code: 03

No. of Post(s): 4

Location: New Delhi

Roles and Responsibilities:

- Identify and analysis of software requirements
- Design, Development, testing and debugging of back-end software in Java
- Design & Development of quality software to enhance software reusability & scalability
 Design and development of API structure
- Coding, Code reviews, unit testing and Release management
- Integration of Software modules & System Integration testing
- Contribute to all phases of the development lifecycle and hands-on with distributed computing systems.
- Collaborating with the front-end developers to establish objectives and design functional, cohesive codes to enhance the user experience.

Skills and Abilities:

- Hands on experience with programming languages like Java, JavaScript, PHP and Python
- Knowledge of Spring Boot, Spring Framework and understanding of Web Application framework (Express Framework)
- In-depth knowledge of data structure & algorithms and its application in software design & development
- Experience with container based application development and Troubleshooting, testing and maintenance of the existing software, including applications, databases, interfaces and new functionalities.
- Working knowledge of Relational Database (Knowledge of NoSQL database is an added advantage)
- Experience with Cloud Environments like AWS / Azure / GCP.
- Knowledge of Optical Link Validation, Network Planning Tool for WDM/POTP
- Architectural knowledge of handling millions of devices in HES of Smart Energy Meters
- Knowledge of Testing & debugging tool and version control system(GIT
- Knowledge of web server configuration for Apache, Tomcat, Nginx.
- Excellent communicator, team player who can work independently also

Minimum Qualifications:

• Min 65% in (10th, 12th and B.E/B.Tech in Computer Science & Engineering or equivalent degree from a recognized college/university).

Eliqibility Criteria:

Project Name: OCN Software

Post code: 04

No. of Post(s): 4

Location: New Delhi

Roles and Responsibilities:

• Identify and analysis of software requirements

- Design, Development, testing and debugging of Web application software
- Web Performance optimization and development of quality components for speed, reusability and scalability
- Design & development of mobile based features
- Collaborate with back-end developers and web designers to improve quality & usability
- Implementation of data manipulation/ data binding through REST API
- Implementation of quality mockups and prototypes of User Interface
- Code reviews and Release management

Skills and Abilities:

- Knowledge of Material UI, ReactJS, Redux, NPM, bootstrap, JQuery
- In-depth knowledge of data structure & algorithms and it's application in software design & development
- Understanding of front-end framework
- Working knowledge of GIS integration
- Knowledge of Optical Link Validation, Network Planning Tool for WDM/POTP shall be an added advantage
- Architectural knowledge of handling millions of devices in HES of Smart Energy Meters
- Understanding of browser rendering behavior and performance.
- Knowledge of tools like ELK, Grafana, Elasticsearch
- Experience in dynamic website or portal and API integration
- Understanding of web application protocols.
- Knowledge of Web application security
- Knowledge of testing & debugging tool and version control system(GIT)
- Stay up-to-date on emerging technologies
- Familiarity with input validation techniques and approaches
- Excellent communicator, team player who can work independently also

Minimum Qualifications:

• Min 65% in (10th, 12th and B.E/B.Tech in Computer Science & Engineering or equivalent degree from a recognized college/university).

Eligibility Criteria:

Project Name: OCN Software

Post code: 05

No. of Post(s): 3

Location: New Delhi

Roles and Responsibilities:

• Identify and analysis of software requirements

- Design, Development, testing and debugging of embedded software, Linux device driver
- Design & Development of quality software to enhance software reusability & scalability
- Porting of Linux, U-boot, SDK on embedded systems
- Porting and Integration of third party and open source software stack
- Interface with hardware design and development
- Code reviews and Release management

Skills and Abilities:

- Solid programming experience in C/C++
- In-depth knowledge of data structure & algorithms and it's application in software design & development
- Understanding of Linux framework, RTOS and embedded system architecture
- Experience in embedded systems design with preemptive, multitasking real-time operating systems. Knowledge of working with SDK in cross-platform environment and understanding of cross-platform toolchains
- Working knowledge of board bring-up having microprocessors, microcontrollers, SoCs, device driver development and porting.
- Good understanding of communication protocols like SPI, I2C, PCI and UART
- Understanding of universal bootloaders(U-Boot). Knowledge of embedded filesystems(journalling flash file system)
- Experience with development of networking protocols (TCP/IP stack, routing, IPv4/IPv6, L2/L3 protocol, IPCs)
- Knowledge of code profiling and application containerization (application in embedded domain)
- Knowledge of building drivers for PowerPC processors T1022,P5040 shall be an added advantage. Proficient in software version maintenance tools such as Git, SVN
- Knowledge of Renesas RL78 family of MCU and ARM Cortex series of microcontrollers
- Knowledge of Broadcom switches Arad+ and Jericho shall be an added advantage
- Excellent problem solving and debugging skills, communicator and a team player.

Minimum Qualifications:

• Min 65% in (10th, 12th and B.E/B.Tech in Computer Science & Engineering or equivalent degree from a recognized college/university).

Eligibility Criteria:

Project Name: OCN Software

Post code: 06

No. of Post(s): 1

Location: New Delhi

Roles and Responsibilities:

Investigating user experience design requirements for our products.

- Gathering and evaluating user requirements, in collaboration with product managers and engineers
- Illustrating design ideas using storyboards, process flows and sitemaps
- Developing and conceptualizing a comprehensive UI/UX design strategy.
- Producing high-quality UX design solutions through wireframes, visuals and graphic designs, flow diagrams, storyboards, site maps, and prototypes.
- Designing UI elements and tools such as navigation menus, search boxes, tabs, and widgets for our products.
- Testing UI elements such as CTAs, banners, page layouts, page designs, page flows, and target links for landing pages.
- Collaborating with the marketing team, and internal and external designers to ensure the creation and delivery of tailored experiences for users.
- Providing advice and guidance on the implementation of UX research methodologies and testing activities in order to analyze and predict user behavior.
- Identify and troubleshoot UX problems (e.g. responsiveness)
- Adhering to style standards on typography and graphic designs.

Skills and Abilities:

- A portfolio of professional UI/UX design work for both web and mobile platforms.
- Expertise in Photoshop, Illustrator, and Adobe XD.
- Working knowledge of the following technologies and software: Sketch, InVision, Figma, Visio, HTML, CSS (SCSS), iOS, Android, Design Systems and Adobe Creative Suite.
- Excellent written and verbal communication skills.
- Multi-tasking and time-management skills, with the ability to prioritize tasks.
- Excellent communicator, team player who can work independently also

Minimum Qualifications:

• Min 65% in (10th, 12th and B.E/B.Tech /B. Des (Fashion Communication) in Computer Science & Engineering or equivalent degree from a recognized college/university)

Eligibility Criteria:

Project Name: CEIR Project

Post code: 07

No. of Post(s): 2

Location: New Delhi

Roles and Responsibilities:

- Operation and Maintenance of H/W and S/W Application based on telecom technology.
- Troubleshooting and escalation of H/W and S/W issue.
- Logging of maintenance activity and issues
- Customer Support.
- Troubleshooting and escalation of customer issue.
- Logging of customer issue.
- Collect feedback from customer

Skills and Abilities:

- Good understanding of Linux and Shell Scripting, TCP/IP Networking, DBMS like
 MySQL, Web Technologies and Telecom technologies 2G/3G/4G.
- · Good written and communication skill.
- · Good problem-solving skill.

Minimum Qualifications:

• Min 65% in (10th, 12th and B.E/B.Tech in Computer Science & Engineering/IT/ECE from a recognized college/university)

Eligibility Criteria:

Project Name: NDMA CAP Integrated Alert System (DSA group)

Post code: 09

No. of Post(s): 3

Location: New Delhi

Roles and Responsibilities:

- Experience/Knowledge of design, development and integration of web-based front-end applications.
- Experience/Knowledge of working with front-end technologies like HTML, JavaScript and CSS.
- Knowledge of JS libraries like jQuery, React JS etc. and CSS libraries like Bootstrap, Materialize etc.
- Experience/Knowledge of interactive user interface developments.
- Knowledge of techniques for better user experience user experience.
- Basic hands-on on web-application development IDE (Eclipse/ NetBeans/ IntelliJ etc.) and hosting tools (web-app container, app-configurator).

Skills and Abilities:

- Skills HTML, JAVASCRIPT, jQuery, CSS, Materialize, Bootstrap
- Worked on live portals, User experience strategies.

Minimum Qualifications:

• Min 65% in (10th, 12th B.E/B.Tech in Computer Science & Engineering/IT/ECE or equivalent degree from a recognized college/university)

Eligibility Criteria:

Project Name: NDMA CAP Integrated Alert System (DSA group)

Post code: 10

No. of Post(s): 5

Location: New Delhi

Roles and Responsibilities:

- Experience/Knowledge of design, development and integration of web-based applications
- Experience/ Knowledge of MVC architecture and coding skills using objectoriented language like - JAVA.
- Knowledge of techniques for better user experience and optimized response time.
- Experience/Knowledge of Database Technologies like PostgreSQL, MongoDB, writing optimized queries.
- Basic hands-on of web application development IDE (Eclipse/NetBea IntelliJ etc.)
 and hosting tools (web-app container, app configurator)

Skills and Abilities:

- JAVA, SQL/No-SQL Databases.
- Knowledge of Spring and Hibernate framework will be preferred.

Minimum Qualifications:

• Min 65% in (10th, 12th, B.E/B.Tech in CSE/IT/ECE or equivalent degree from a recognized college/university.)

Eligibility Criteria:

Project Name: NDMA CAP Integrated Alert System (DSA group)

Post code: 11

No. of Post(s): 2

Location: New Delhi

Roles and Responsibilities:

- Working knowledge in Android and iOS app development using React Native Framework.
- Experience with Android SDK and working with remote data via REST and JSON.
- Knowledge of iOS, iPad, C++, Objective C, iPhone SDK, Xcode, Swift and Cocoa Touch
- Work with Javascript, React Native for App Development
- Knowledge of UI development using XML
- Working knowledge of the general mobile landscape, architectures, trends, and emerging technologies
- Experience in live app operation, maintenance and update
- Publishing of mobile apps on Play Store and App Store

Skills and Abilities:

- Javascript, Mobile App, iOS, Android, React Native.
- React Native Framework
- REST, JSON
- iOS, iPad, C++, Objective C, iPhone SDK, Xcode, Swift and Cocoa Touch
- Hosting App in Play store and App Store

Minimum Qualifications:

• Min 65% in (10th, 12th ,B.E/B.Tech in CSE/IT/ECE or equivalent degree from a recognized college/university).

Eligibility Criteria:

Project Name: NDMA CAP Integrated Alert System (DSA group)

Post code: 12

No. of Post(s): 2

Location: New Delhi

Roles and Responsibilities:

- Designing manual and automated test procedures to evaluate each software product.
- Building, coding, and implementing software evaluation test programs.
- Running test programs to ensure that testing protocols evaluate the software correctly.
- Completing final test and creating test reports.
- Presenting test reports to management and suggesting software fixes.
- Knowledge of tools like- jMeter, Selenium, jUnit, Bug management tools like
 – JIRA

Skills and Abilities:

- Automated testing skills and scripting, design test plan and test strategy,
 writing test cases, executing test cases, opening bugs, verifying bugs
- Mobile App, iOS, Android, React Native.

Minimum Qualifications:

• Min 65% in (10th, 12th, B.E/B.Tech in CSE/IT/ECE or equivalent degree from a recognized college/university.)

Eligibility Criteria:

Project Name: NDMA CAP Integrated Alert System (DSA group)

Post code: 13

No. of Post(s): 2

Location: New Delhi

Roles and Responsibilities:

- Audit, assessment, and penetration testing techniques
- Experience with malware, Threat analysis and modelling, thorough understanding of attacks and threats
- Capability to influence others while adhering to a secure development lifecycle for a wide range of software products and technologies.
- Experience implementing security solutions that resolve security and business risk trade-offs
- An understanding of networking and communication protocols (such as TCP/IP, UDP, SSL/TLS, IPSEC, HTTP, HTTPS)
- Security venerability and threat analysis

Skills and Abilities:

- JAVA, C++, Linux architecture, Security Tools, OWASP Top 10 and CWE top 25
- Vulnerabilities
- An understanding of cryptography, web service frameworks, mobile application architectures, and service architectures (such as event-driven, service-oriented, or server less architectures).

Minimum Qualifications:

• Min 65% in (10th, 12th ,B.E/B.Tech in Computer Science & Engineering/IT/ECE or equivalent degree from a recognized college/university).

Eligibility Criteria:

Project Name: NDMA CAP Integrated Alert System (DSA group)

Post code: 14

No. of Post(s): 2

Location: New Delhi

Roles and Responsibilities:

- 1. Experience/Knowledge of administration and troubleshooting for DevOps/Deployment, Orchestration Management, and Configuration Management
- 2. Deploying application into cloud using CI/CD
- 3. Continuous Integration and Continuous Deployment process using docker, jenkins etc.
- 4. Writing automation scripts to automate cloud deployment
- 5. Experience/Knowledge of in migration of conventional applications to the cloud
- 6. Experience/Knowledge of System Administration with Linux (Ubuntu, CentOS, RedHat)

Skills and Abilities:

- Linux administration, Load balancer setup, Database synchronization, SSL and Security certificate configuration
- Load Balancing, SSL over HTTPs, CI/CD, Certification in cloud domain

Minimum Qualifications:

• Min 65% in (10th, 12th ,B.E/B.Tech in CSE/IT/ECE or equivalent degree from a recognized college/university).

Eligibility Criteria:

Project Name: a) 4G/5G testing/POC/deployment in Railways

b) 4G/5G deployment in BSNL

Post code: 15

No. of Post(s): 15

Location: New Delhi/Kolkata

Roles and Responsibilities:

- 1. Installation, commissioning and day to day activities to be performed at office and various sites PAN India
- 2. System integration and testing in C-DOT lab and at various PAN India sites.
- 3. Interfacing with various government and non-government customers for resolution of issues coming in their network

Skills and Abilities:

- Candidate shall have experience of installation, deployment and support of different elements of 2G/3G/4G network
- 2. Candidate shall have experience of working on Network management and troubleshooting.
- 3. Hands-on experience of working on UNIX/Linux environment, shell scripting will be an additional advantage
- 4. Candidate shall have experience of working on Cloud environment.
- 5. Knowledge of Architecture of EPC & IMS as well as different Call flows in 4G/Volte Network
- 6. Good grasp on different Debugging Tools like Wireshark, Tcpdump, Tethereal
- 7. Knowledge of VOIP, SIP, Megaco, Diameter, MAP, GTP etc.
- 8. Knowledge of Networking Protocols i.e. OSPF, BGP, ACL, MPLS etc.
- 9. Comfortable with frequent Travelling/Field Visit at Customer sitesGood verbal and oral communication skill

Minimum Qualifications:

• Min 65% in (10th, 12th ,B.E/B.Tech in CSE/IT/ECE or equivalent degree from a recognized college/university.

Eligibility Criteria:

<u>Project Name</u>: Wi-Fi Technology Enhancement and Rollout

Post code: 16

No. of Post(s): 02

Location: New Delhi / Bengaluru

Roles and Responsibilities:

Installation and Field Work for Wi-Fi

- RF survey and requirement finalization for any Wi-Fi deployment
- Installation of Wi-Fi solution, Network configuration with respect to TSP/ISP, Testing and Acceptance Testing as per the customer requirement.
- Provide support after installation.
- Training for operation and maintenance of network.
- Require extensive traveling for field deployment.

Call Centre and Certification Related Activity:

- To provide extensive support to PDOAs and APP providers in day-to-day operation and maintenance.
- 24x7 Call-Centre support through mobile operator
- Full-fledged Control Room / Helpdesk between 9 AM to 8 PM
- Certification of PDOA stack and APP along with the preparation of reports.

Skills and Abilities:

- Knowledge of IT and server-based system and fundamental of IP/LAN/Wi-Fi technology.
- Knowledge of remote installation and support to customer

Minimum Qualifications:

• Min 65% in (10th, 12th ,B.E/B.Tech in ECE or equivalent degree from a recognized college/university).

Eliqibility Criteria:

Project Name: Switch and Router support- R34 (NGN)

Post code: 17

No. of Post(s): 2

Location: New Delhi

Roles and Responsibilities:

- Managing Router lab and associated infrastructure
- · Field support activities

Skills and Abilities:

- Knowledge of computer networking.
- CCNA certification/training preferable

Minimum Qualifications:

• Min 65% in (10th, 12th, B.E/B.Tech in ECE from a recognized college/university).

Eligibility Criteria:

Project Name: OCN Project: C04

Post code: 18

No. of Post(s): 6

Location: New Delhi

Roles and Responsibilities:

- Hardware board testing.
- Good analytical skills for hardware debug
- Handling sensitive instruments like oscilloscope, optical analysers etc.
- PCB Design exposure
- Should be able to work under minimal supervision.

Skills and Abilities:

Microcontroller C coding, VHDL, Python scripting

Minimum Qualifications:

• Min 65% in (10th, 12Th, B.E/B.Tech in ECE from a recognized college/university).

Eligibility Criteria:

Project Name: TSOC Project

Post code: 19

No. of Post(s): 2

Location: New Delhi / Bengaluru

Roles and Responsibilities

- 1. Monitoring of Pan-India MPLS links and interaction with ISPs/TSPs and MPLS service providers.
- 2. Monitoring of Routers, configuration, replacement and interaction with vendor & C-DOT router team.
- 3. Probe application monitoring & servers troubleshooting, interaction with Hardware vendor, ISPs/TSPs and C-DOT development team.
- 4. Monitoringof Data Center Network & Security (Router, Firewall, Core& access switches for 400G Backbonecovering 80 Racks.
- 5. Big-Data Platform comprising of following clusters with hunders of nodes.
 - IPFIX Collector cluster
 - Kafka cluster
 - SPARK cluster
 - Logstash nodes
 - Elasticsearch application and storage Hot & Warm clusters.
 - Web based application nodes, Mongo DB etc.

Skills and Abilities:

- 1. Candidates having cybersecurity-related certification (e.g. Ethical hacking, Network forensic, Computer forensic etc.) shall be preferred.
- 2. Knowledge of shell scripting, Python scripting, Linux (CentOS/Ubuntu), Windows OS
- 3. Knowledge of TCP/IP Protocol, Routing Protocol as BGP, IPFIX protocol, DNS, DHCP, HTTP, HTTPs, SIP etc.
- 4. Knowledge of IP protocols, packet debugging tools such as Wireshark, tcpdump, ping, traceroute, Nmap, Hping etc.
- 5. Knowledge of ICT device configuration like Router, Switches, PC, Servers etc.
- 6. Knowlede of Big data Applications as Kaka, Spark, ELKstack, MongoDB, Hadoop etc.

Minimum Qualifications:

 Min 65% in (10th, 12th, B.E/B.Tech in CSE/ECE or equivalent degree from a recognized college/university).

Eligibility Criteria:

Project Name:

a. QKD Software

b. OAAS (GPON) Software

Post code: 20

No. of Post(s): 2

Location: New Delhi

Roles and Responsibilities:

 Development and testing of system software for various modules for optical access and quantum network management

Skills and Abilities:

- Proficiency in programming languages, such as C/C++/Python/Java, SQL.
- Deep understanding of Web application technologies such as gRPC, REST, container, docker, Kubernets etc.
- Extensive experience in deploying, optimising and maintaining software.
- Excellent analytical and problem solving skills.

Minimum Qualifications:

• Min 65% in (10th, 12th,B.E/B.Tech in CSE/ ECE /IT or equivalent degree from a recognized college/university).

Eligibility Criteria:

Project Name:

a. QKD Software

b. OAAS (GPON) Software

Post code: 21

No. of Post(s): 2

Location: New Delhi

Roles and Responsibilities:

• Design and development of switching and routing software. Working closely with the switch SDK to develop various L2 and L3 features for optical access devices.

Skills and Abilities:

- Proficiency in C/C++, shell scripting.
- Deep understanding of TCP/IP protocol stack, IPV4 and V6, switching and routing protocols.
- Experience of working on linux kernel and network layer.
- Excellent analytical and problem solving skills.

Minimum Qualifications:

• Min 65% in (10th, 12th, B.E/B.Tech in CSE/ECE /IT or equivalent degree from a recognized college/university.

Eligibility Criteria:

Project Name:

a. QKD Software

b. OAAS (GPON) Software

Post code: 23

No. of Post(s):1

Location: New Delhi

Roles and Responsibilities:

• Expect to participate in all phases of the optical product development cycle, from definition, design, documentation, implementation and testing.

Skills and Abilities:

- Proficiency in any one programming languages C/C++, Python
- Knowledge of Al/ML for modelling and performance evaluation
- Deep understanding and experience of TCP/IP protocol stack, HTTP (S) and other protocols.
- Experience with Agile development methodologies and DevOps environments.
- Practical knowledge of system architectures and networking.
- Knowledge of databases
- Experience with version control such as git

Minimum Qualifications:

- Min 65% in (10th, 12th, B.E/B.Tech in CSE/ ECE /IT or equivalent degree from a recognized college/university).
- 0-3 years of professional work experience post qualification. Preference will be given to GATE qualified candidates.

Project Name:

a. QKD Software

b. OAAS (GPON) Software

Post code: 24

No. of Post(s):2

Location: New Delhi

Roles and Responsibilities:

• Expected to work on Low level software such as boot-loaders, Linux kernel and configuration on various optical products.

Skills and Abilities:

- Proficiency in programming languages C/C++.
- Practical knowledge of system architectures, networking and embedded systems.
- Embedded Linux development experience on ARM or other processes.
- Practical knowledge of BSP, Linux kernel, Linux Device Drivers etc.
- Experience with version control software git.
- Experience with device drivers for devices having I2C, SPI, UART, Ethernet, PCIe Interfaces.

Minimum Qualifications:

• Min 65% in (10th, 12th B.E/B.Tech in CS/ ECE /IT or equivalent degree from a recognized college/university).

Eligibility Criteria:

Project Name:

1. QKD Software

2. OAAS (GPON) Software

Post code: 25

No. of Post(s): 1

Location: New Delhi

Roles and Responsibilities:

Responsibilities: Developing GUI for Network Manager of optical networks.

• Roles: GUI design, development and integration testing.

Skills and Abilities:

- Python, C++/Java, Database (relational, non-relational), Micro-service architecture, inter-process communication.
- Working knowledge of HTML, Javascript, CSS
- Working experience of frameworks React JS / Angular is preferred.

Minimum Qualifications:

• Min 65% in (10th, 12th, B.E/B.Tech in Computer Science from a recognized college/university).

Eligibility Criteria:

<u>Project Name:</u> 4G LTE IMS CONVERGED CORE COMMERCIALIZATION IN BSNL NETWORK - R42

Post code: 27

No. of Post(s):2

Location: Bengaluru

Roles and Responsibilities:

- Development of packet/message processing application
- Testing and debugging

Skills and Abilities:

- C Programming
- Knowledge of Linux, shell scripting
- Knowledge of networking IPC, sockets
- Knowledge of compilation and debugging tools

Minimum Qualifications:

• Min 65% in (10th, 12th, B.E/B.Tech in Computer Science from a recognized college/university).

Eligibility Criteria:

Project Name: DEVELOPMENT OF 5G STANDALONE (SA) CORE - G05 code

Post code: 28

No. of Post(s): 2

Location: Bengaluru

Roles and Responsibilities:

- Platform s/w porting of embedded systems
- Tester s/w development and testing.
- Integration testing with h/w

Skills and Abilities:

- Knowledge of Embedded systems (Bootloader, OS etc.) with any prior testing experience (if possible)
- C programming
- Knowledge of Linux, shell-scripting
- Knowledge of compilation and debugging tools

Minimum Qualifications:

• Min 65% in (10th, 12th,B.E/B.Tech in Computer Science from a recognized college/university).

Eligibility Criteria:

Project Name: a) CMS Support- Testing for new services

b) SAMVAD for LEAs

c) IMPLN of LEAs

Post code: 29

No. of Post(s): 4

Location: Bengaluru

Roles and Responsibilities:

Electronic Provisioning and Interception Testing of new services launched / upgradation of their switch network by TSPs

- NG-PSTN,
- PSTN,
- ILD,
- IPLC,
- 4G LTE services,
- VoLTE with CMS at each LSA in coordination with respective LI vendor / TSP.

The above testing is to be performed for the following LSAs

- Tamil Nadu
- Madya Pradesh
- Odisha
- Gujarat
- Mumbai
- Andhra Pradesh
- Kerala
- Karnataka
- Maharashtra

LEMF systems are deployed at LEA site and the initial testing is expected to be carried out to enable smooth hand-over of LEMF system to LEAs.

Skills and Abilities:

Knowledge in Wire-less and Wire-line technologies

Minimum Qualifications:

 Min 65% in (10th, 12th, B.E/B.Tech in Computer Science/ECE from a recognized college/university).

Eligibility Criteria:

• 0-3 years of professional work experience post qualification.

Project Name: Quantum Key Distribution

Post code: 30

No. of Post(s): 02

Location: New Delhi

Skills and Abilities:

- Strong Theoretical Background in Quantum Communications / Quantum Mechanics
- Expertise in analysing QKD Protocols (& security proofs for the same) and support teams implementing the same
- Practical QKD implementation experience desirable
- Good understanding of various types of attack strategies on different QKD protocol implementations
- Should have thorough knowledge of Quantum Mechanics in general and all aspects related to Quantum Communications in particular
- Strong documentation and presentation skills; must be proficient in relevant software tools used in the same

Minimum Qualifications:

- Min 65% in (10th, 12th, B.Tech. ECE / B.Tech (Engineering Physics) / M.Sc. (Physics) or equivalent from a recognized college/university)
- M.E/M.Tech/MSc or Doctrate in Quantum Mechanics/ Quantum communication will be given preference

Eligibility Criteria:

Project Name: Quantum Key Distribution

Post code: 31

No. of Post(s):01

Location: New Delhi

Skills and Abilities:

- Experience in FPGA design, from low-level hardware description languages like Verilog/VHDL to high-level programming options like C, C++, and open computing language (OpenCL)
- Knowledge of Xilinx FPGA cards, and tools like Vivado for application development on FPGA, IP Core development and integration
- Experience of working on Optical Communication products desirable
- Strong digital design concepts as well as knowledge of Linux operating system
- Coding knowledge of C, C++, shell scripting, Python scripting
- Knowledge of Ethernet & other telecom protocols, error correction, privacy amplification, synchronization etc.
- Experience in handling lab instruments for debugging e.g. Mixed Signal Oscilloscope, signal generators etc.
- Experience in FPGA Timing closure
- Experience working with SoC based systems and knowledge of protocols such as SPI, UART, I2C, USB.
- Strong documentation and presentation skills; must be proficient in relevant software tools used in the same

Minimum Qualifications:

- Min 65% in (10th, 12th B/E/ B.Tech.in ECE or equivalent from a recognized college/university)
- M.E/ M.Tech or equivalent in Electronics & Communication, Electrical, Instrumentation will be given preference.

Eligibility Criteria:

Project Name: a) Quantum Key Distribution b) TWDM-PON.

Post code: 32

No. of Post(s): 5

Location: New Delhi

Skills and Abilities:

- Strong optical communication fundamentals
- Experience of designing optical communication products and handling of Optical Components
- Good theoretical and practical knowledge of optical devices used in Optical Communication and Quantum Communications
- Good Board design skills and proficiency in tools used for the same
- Strong analog design concepts and proficiency in tools used for the same
- Strong documentation and presentation skills. Must be proficient in relevant software tools used in the same

Minimum Qualifications:

- \bullet Min 65% in (10th, 12th, B.E/B.Tech in ECE or equivalent from a recognized college/university
- M.E/ M.Tech. or equivalent in Electronics & Communication, Electrical, Instrumentation, Optoelectronics or Optical Communication will be given preference..

Eligibility Criteria:

□ 0-3 years of professional work experience post qualificati	on
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Project Name: a) Data Center cloud infrastructure b) Network Security

Post code: 34

No. of Post(s): 2

Location: Bengaluru

Roles and Responsibilities:

Implementation, configuration and commissioning of:

- Virtual infrastructure
- Windows domain infrastructure
- Critical network services
- Network security

Skills and Abilities:

- Windows ADS & LDAP administration
- Linux server administraton
- Network services setup and administration DNS, DHCP, NFS, syslog, AAA
- Network devices switches, routers, firewall configuration
- Network management
- Security implementation in end-points and network devices
- Hypervisor administration Vmware ESXi, vCenter
- SAN administration
- Database administration
- Data center management practices
- Docker and kubernetes management
- Scripting skills with Shell, perl, python

Minimum Qualifications:

• Min 65% in (10th, 12th, B.E/B.Tech in ECE or IS/IT from a recognized college/university

Eligibility Criteria:

- 0-3 years of professional work experience post qualification.
- Preference would be given to candidates having industry certifications from:- Cisco, Vmware, Microsoft, Linux Professional Institute, RedHat etc

Project Name: 4G RAN PROJECT

Post code: 35

No. of Post(s): 02

Location: Bengaluru

Roles and Responsibilities:

- Develop test procedures and strategies to carry out system testing
- Development of Validation plans for testing 4GRAN and 5GRAN systems
- Testing and Validation of 4GRAN.5GRAN systems
- Debugging and maintaining the 4GRAN,5GRAN systems
- Generating and Analyzing the Test Reports and Validation Reports
- Generation and Review of Specifications for 4G and 5G systems
- Review test result data to ensure that actual performance meets expected requirements
- Provide technical support in performing RF system testing
- Design test fixtures and develop and calibrate test equipment.

Skills and Abilities:

- Hands-on experience with RF equipment is an advantage (signal analyzers, oscilloscopes, signal generators, power meters)
- Knowledge of 3GPP specification is an advantage
- Experience in test automation (perl/python)
- Solid knowledge of 4G/5G standard, especially air interface
- Solid Knowledge on Antenna testing and debugging
- Moderate to Expert level knowledge Antenna subsystem of 4G / 5G Systems.
- Debugging and Analysing skills when facing problem with RF parameters or RF Set-up.
- Moderate to Expert level knowledge on 4G/5G Base Station RF Conformance tests.
- Knowledge on TEC specifications and 3GPP specifications.
- Moderate to Expert level knowledge on RF components like Attenuators, Adopters, cables
- Moderate knowledge of Test-Automation will be an added advantage
- Analyze and troubleshoot RF test equipment in a timely and accurate manner
- Understand customer requirements and accordingly prepare test specifications.
- Knowledge of UNIX/Linux environment and command line
- Understanding of technical documentation and technical writing skills

Minimum Qualifications:

• Min 65% in (10th, 12th,B.E/B.Tech in Electronics & Communication Engineering or equivalent degree from a recognized college/university)

Eligibility Criteria:

Project Name: 5G RAN PROJECT

Post code: 36

No. of Post(s): 03

Location: Bengaluru

Roles and Responsibilities:

- Design, Develop and Build Test Automation frameworks
- Design and Development of Test suites for the 4G and 5G system.
- Write, design, and execute automated tests by creating scripts that run testing functions automatically
- Maximize test coverage for the most critical features of the system
- Determine the priority for test scenarios and create execution plans to implement these scenarios

Skills and Abilities:

- Comprehensive knowledge in the field of software development
- Knowledge of Artificial Intelligence / Machine Language
- Knowledge on Cloud computing, CI/CD tools like Jekins
- Understanding the Industry Standards : 3gpp standards, Tec standards
- Moderate Knowledge on simulators : 2G/3G/4G node Simulators, UE simulators
- Moderate knowledge on Software testing tools: Wire shark, Scripting languages.
- Linux administration and Linux networking
- Programming expertise: High level languages C,C++,Java and Python
- Moderate knowledge on Databases: SQL, ORACLE etc.
- Knowledge on Andriod OS to Support Mobile-Telephone Automations
- Full stack developers for Test Automation of Validation Test Cases Execution, Configuration, monitoring and maintaining the Test Environment

Minimum Qualifications:

• Min 65% in (10th, 12th, B.E/B.Tech in Computer Science & Engineering or equivalent degree from a recognized college/university)

Eliqibility Criteria:

Project Name: 5G RAN PROJECT

Post code: 37

No. of Post(s): 03

Location: Bengaluru

Roles and Responsibilities:

- Enable to the Hardware electronics systems and test equipment to integrate in Test Automation frameworks
- Design and Development of Test suites scenarios for the 4G and 5G system.
- Write, design, and execute automated tests by creating scripts that run testing functions automatically
- Maximize test coverage for the most critical features of the system
- Determine the priority for test scenarios and create execution plans to implement these scenarios

Skills and Abilities:

- Comprehensive knowledge in the field of hardware development and testing
- Understanding the Industry Standards: 3gpp standards, Tec standards
- Moderate Knowledge on simulators: 2G/3G/4G node Simulators,UE simulators,Channel Emulators, Driver test tools and basic electronic system testing measuring tools
- Moderate knowledge on Software testing tools: Wire shark, Scripting languages.
- Linux administration and Linux networking

Minimum Qualifications:

• Min 65% in (10th, 12th, B.E/B.Tech in Electronics & Communication Engineering or equivalent degree from a recognized college/university).

Eligibility Criteria:

Project Name: CAS-STB enhancement and support

Post code: 38

No. of Post(s): 1

Location: Bengaluru

Roles and Responsibilities:

Shall be capable of working on

- 1. Android OS and its app development using Android SDK and Android Studio
- 2. REST and JSON.
- 3. Database
- 4. React, HTML, XML, JAVA, Kotlin and Gradle
- 5. UI development using XML and JSON
- 6. Android Interactivity and UI framework
- 7. Publishing of mobile apps on Play Store
- 8. Live app operation, maintenance and update

Skills and Abilities:

- 1. JAVA 8 or above, Javascript ES6
- 2. Mobile App development, Android, React
- 3. REST Apps,
- 4. Hosting and maintaining Apps in play store

Minimum Qualifications:

• Min 65% in (10th, 12th,B.E/B.Tech in CSE /IT/ECE or equivalent degree from a recognized college/university).

Eligibility Criteria:

Project Name: 4G Radio Access Network

Post code: 39

No. of Post(s): 4

Location: Bengaluru

Roles and Responsibilities:

- Development of EMS Features
- Handling Integration activities
- Automation of test plans
- Migration of 4G EMS to 5G complaint EMS (Element Management System)
- Testing and Trials

Skills and Abilities:

- Knowledge of Wireless Technologies, Computer Networking, Data Networking, Signal Processing
- Wireless network system architecture and subsystem design
- Testing and debugging tools
- Configuration Management, Scripting, Build and Development environment
- Able to work with Product integration and testing like functional testing, load testing, Stability testing, Regression testing etc
- Comfortable with organization processes
- C/C++ programming skills along with scripting.
- Unix Network Programming
- Data Structures and Algorithms
- JAVA Language
- Web Developement (JSP, JavaScript, AJAX, HTML, Application Server, Web Server
- Database (Knowledge of Oracle or MySgl orPostgres)
- ORM Framework
- Framework (Sping Boot, Structs, BOOTSTRAP)

Minimum Qualifications:

• Min 65% in (10th, 12th, B.E/B.Tech in CSE from a recognized college/university).

Eligibility Criteria:

Project Name: 4G Radio Access Network

Post code: 40

No. of Post(s): 6

Location: Bengaluru

Roles and Responsibilities:

 Platform Software/ Firmware/ Operating Systems/ Drivers Development, Testing and Trials

Skills and Abilities:

- Knowledge of Wireless Technologies, Computer Networking, Data Networking, Signal Processing
- Wireless network system architecture and subsystem design
- · System Engineering Aspects,
- Testing and debugging tools, Signal generator/analyzers, Logic Analyzers
- · Configuration Management, Scripting, Build and Development environment
- Able to work with Product integration and testing like functional testing, load testing, Stability testing, Regression testing etc
- Comfortable with organization processes
- Processors, Devices, SoCs, FPGA, on-board devices and interface devices.
- Operating Systems, distributions, packaging, devices, kernels, device drivers, data plane development, uboot, compilation, linking, loading
- C/C++ programming skills along with scripting.
- Power-on self-test.

Minimum Qualifications:

• Min 65% in (10th, 12th, B.E/B.Tech in CSE /ECE from a recognized college/university).

Eligibility Criteria:

• 0-3 years of professional work experience post qualification. Preference will be given to GATE qualified candidates.

Project Name: 4G Radio Access Network

Post code: 41

No. of Post(s): 6

Location: Bengaluru

Roles and Responsibilities:

RAN/RRH related development in FPGA, System level testing, and Trials

Skills and Abilities:

- Knowledge of Wireless Technologies, Computer Networking, Data Networking, Signal Processing
- Wireless network system architecture and subsystem design
- Computer Architecture, Digital Logic, Processor/FPGA/SoC interfacing
- Knowledge in hardware design (Circuit Design and Analysis, PCB, Devices, Signal and power integrity, interface with CAD/VDG/EPG)
- Expertise in FPGA Development Tools for FPGA development, Timing analysis, Languages (VHDL/Verilog), Simulation, Modeling, Programming
- Matlab and Simulink and equivalent tools
- Ability to learn and use RF analysis and design tools
- Testing and debugging tools, Signal generator/analyzers, Logic Analyzers
- SDR concepts, Waveforms, Digital Filters, Interfacing with IP from other vendors.
- Knowledge of industry standards, standardization
- Comfortable with organization processes
- Good understanding of 3GPP wireless standards

Minimum Qualifications:

• Min 65% in (10th, 12th, B.E/B.Tech in ECE from a recognized college/university).

Eligibility Criteria:

• 0-3 years of professional work experience post qualification. Preference will be given to GATE qualified candidates.

Project Name: 4G Radio Access Network

Post code: 42

No. of Post(s): 6

Location: Bengaluru

Roles and Responsibilities:

RRH Analog & RF Hardware and System Level Testing, Trials

Skills and Abilities:

- Knowledge of Wireless Technologies, Computer Networking, Data Networking, Signal Processing
- Wireless network system architecture and subsystem design
- Computer Architecture, Digital Logic, Processor/FPGA/SoC interfacing
- Expertise in hardware design (Circuit Design and Analysis, PCB, Devices, Signal and power integrity, interface with CAD/VDG/EPG)
- Ability to learn and use RF analysis and design tools
- Testing and debugging tools, Signal generator/analyzers, Logic Analyzers
- Knowledge of industry standards, standardization
- Comfortable with organization processes
- Good understanding of 3GPP wireless standards

Minimum Qualifications:

• Min 65% in (10th, 12th, B.E/B.Tech in ECE from a recognized college/university).

Eligibility Criteria:

Project Name: 4G Radio Access Network

Post code: 43

No. of Post(s): 8

Location: Bengaluru

Roles and Responsibilities:

LTE/NBIOT/5GNR Layer 2, Layer 3, RRM, SON Development, Testing, Trials

Skills and Abilities:

- Knowledge of Wireless Technologies, Computer Networking, Data Networking, Signal Processing
- Wireless network system architecture and subsystem design
- Testing and debugging tools
- · Configuration Management, Scripting, Build and Development environment
- Able to work with Product integration and testing like functional testing, load testing, Stability testing, Regression testing etc
- Comfortable with organization processes
- C/C++ programming skills along with scripting.
- Unix Network Programming
- Data Structures and Algorithms
- Design Patterns
- Familiarity with Protocol Stack Development
- Good understanding of 3GPP wireless standards

Minimum Qualifications:

• Min 65% in (10th, 12th, B.E/B.Tech in ECE/CSE from a recognized college/university). Preference will be given to candidates from CSE background.

Eligibility Criteria:

Project Name: 4G Radio Access Network

Post code: 44

No. of Post(s): 6

Location: Bengaluru

Roles and Responsibilities:

LTE/NBIOT/5GNR Layer 2, Layer 3, RRM, SON Development, Testing, Trials

Skills and Abilities:

- Knowledge of Wireless Technologies, Computer Networking, Data Networking, Signal Processing
- Knowledge of LTE / UMTS / WCDMA / HSDPA/ 5G or WLAN standards in the physical layer and future developments within 3GPP, OFDM, MIMO
- Wireless network system architecture and subsystem design
- Testing and debugging tools
- Experience with handling of specific test equipment (signal generator, signal analyser, logic analyser and pattern generator) is beneficial
- Expertise in FPGA Development Tools for FPGA development, Timing analysis, Languages (VHDL/Verilog), Simulation, Modeling, Programming
- Matlab and Simulink and equivalent tools
- DSP Programming skillset preferred
- Comfortable with organization processes
- C/C++ programming skills along with scripting.
- Unix Network Programming
- Data Structures and Algorithms
- Good understanding of 3GPP wireless standards

Minimum Qualifications:

• Min 65% in (10th, 12th, B.E/B.Tech in ECE/CSE from a recognized college/university).

Eligibility Criteria:

Project Name: 4G Radio Access Network

Post code: 45

No. of Post(s): 6

Location: Bengaluru

Roles and Responsibilities:

- Hardware Development, Integration Testing
- BOM preparation and verification
- Card level documentation
- QA Validation
- Card testing and Card level reworks
- Development, Testing and Trials

Skills and Abilities:

- Knowledge of Wireless Technologies, Computer Networking, Data Networking, Signal Processing
- · Wireless network system architecture and subsystem design
- Computer Architecture, Digital Logic, Processor/FPGA/SoC interfacing
- Expertise in hardware design (Circuit Design and Analysis, PCB, Devices, Signal and power integrity, interface with CAD/VDG/EPG)
- Testing and debugging tools, Signal generator/analyzers, Logic Analyzers
- · Knowledge of industry standards, standardization
- Comfortable with organization processes
- Good understanding of 3GPP wireless standards

Minimum Qualifications:

• Min 65% in (10th, 12th, B.E/B.Tech in ECE from a recognized college/university).

Eligibility Criteria:

Project Name: 4g Field trial for Railways and Roll out for BSNL for South India

Post code: 46

No. of Post(s): 5

Location: Bengaluru /Hyderabad

Roles and Responsibilities:

- Installation, commissioning and day to day activities to be performed at Railway 4G Proof of Concept Sites (Secunderabad) and BSNL/Railway sites PAN India.
- Conducting Field trial activities for Railway 4G up gradation, which includes 4G Core maintenance, up gradation and integration with enodeB and IP/MPLS backbone.
- CORE and 4G RAN System integration and testing in C-DOT lab and at various PAN India sites.
- Interfacing with various government and non-government customers for resolution of issues coming in their network

Skills and Abilities:

- Candidate shall have experience of installation, deployment and support of different elements of 2G/3G/4G network
- Candidate shall have experience of working on Network management and troubleshooting.
- Hands-on experience of working on UNIX/Linux environment, shell scripting will be an additional advantage
- Candidate shall have experience of working on Cloud environment and loading/configuring the Servers.
- Knowledge of Architecture of EPC & IMS as well as different Call flows in 4G/Volte Network
- Having 4G RAN architecture knowledge will be preferred.
- Good grasp on different Debugging Tools like Wireshark, Tcpdump, Tethereal
- Knowledge of VOIP, SIP, Megaco, Diameter, MAP, GTP etc.
- Knowledge of Networking Protocols i.e. OSPF, BGP, ACL, MPLS etc.
- Comfortable with frequent Travelling/Field Visit at Customer sites. Good verbal and oral communication skills and able to analyse/present using Powerpoint/Excel.

Minimum Qualifications:

• Min 65% in (10th, 12th ,B.E/BTech in Computer Science & Engineering/IT/ECE or equivalent degree from a recognized college/university).

Eligibility Criteria:

• 0-3 years of professional work experience post qualification, preferably in telecom industry.

Project Name: MAXNG Support

Post code: 47

No. of Post(s): 3

Location: Hyderabad/Pune/Bhopal

Roles and Responsibilities:

- Handling routine maintenance issues at NGN CORE and related access sites.
- Upgrading and testing the new software release and patches as and when available.
- Conducting periodic audit on CORE elements and updating health status.
- Interfacing with various BSNL nodal agencies for resolution of issues coming in their network.
- Conducting periodic switchover from PR to GR CORE site.
- Checking all type of call scenarios and call detail record (CDR)

Skills and Abilities:

- Must have good knowledge of Switching and IP domain telecom network
- Hands-on experience of working on UNIX/Linux environment, shell scripting will be an additional advantage
- Having experience of working on Cloud environment and loading/configuring the Servers in LINUX/UBUNTU environment.
- Good grasp on different Debugging Tools like Wireshark, Tcpdump, Tethereal
- Knowledge of VOIP, SIP, Megaco, Diameter, MAP, GTP etc.
- Knowledge of Networking Protocols i.e. OSPF, BGP, ACL, MPLS etc.
- Comfortable with frequent Travelling/Field Visit at Customer sites. Good verbal and oral communication skills and able to analyse/present using Powerpoint/Excel.

Minimum Qualifications:

• Min 65% in (10th, 12th,B.E/B.Tech in Computer Science & Engineering/IT/ECE or equivalent degree from a recognized college/university).

Eligibility Criteria:

• 0-3 years of professional work experience post qualification, preferably in telecom industry.

Project Name: MIS Support

Post code: 48

No. of Post(s): 03

<u>Location</u>: New Delhi / Bengaluru(01)

Roles and Responsibilities:

- Providing Support for Management Information System (MIS) and ERP activities.
- Automation of internal processes.
- Development of new software packages for MIS and ERP
- Development of web portals and Mobile Applications.

Skills and Abilities:

- Hands on experienced in software design, development, testing and debugging of web applications.
- Working Knowledge of JAVA technologies Net/Java, ASP/JSP/PHP, SQL, PL-SQL, HTML, Java Script,
- Working Knowledge of databases Oracle / Sql Server / MySql
- Working experience in Operating systems Windows/Linux.
- Working Knowledge of Mobile APP development.
- Working Knowledge of Oracle ERP

Minimum Qualifications:

• Min 65% in (10th, 12th, B.E/B.Tech in Computer Science & Engineering or equivalent degree from a recognized college/university)

Eligibility Criteria:

Project Name: POC/ FIELD TRIAL SUPPORT-4G RAN

Post Code: 49

No. of Post(s): 04

<u>Location</u>: Railways (Secunderabad)

Roles and Responsibilities:

Support the Field trails/PoCs of the 4GRAN-eNodeB

- Deploy and Integrate the 4GRAN systems in the Field as needed
- Solve the EUTRAN technical issues in bringing up and operating in the Field
- Support and guidance to customers for operations and maintenance of 4G Network
- Network coverage test using Network analyzers, Drive test tools and other tools.
- To execute the test cases for the 4GRAN network in the field
- Support to 4GRAN deployment and field support all over India
- Travel to anywhere all over India for 4GRAN field support and field trails.

Skills and Abilities:

- Hands-on working experience and expert knowledge of 4G/5G telecommunication systems is preferred
- Understanding principles of mobile communication network and main protocols. Knowledge about Protocols of 4G/5G will be added advantage
- Wide knowledge of testing approaches
- Knowledge of Linus OS, Linux Administration and Linux networking
- knowledge of RF measurement tools
- Excellent communicator, Team Player Attitude who can work independently also

Minimum Qualifications:

• Min 65% in (10th, 12th,BE/B.Tech in Electronics & Communication Engineering or equivalent degree from a recognized college/university)

Eligibility Criteria:

• 0-3 years of professional work experience post qualification. Preference will be given any cellular (2G/3G/4G) wireless deployment field experience

Project Name: Marketing and Corporate Communication

Post Code: 50

No. of Post(s): 08

Location: New Delhi/Bangalore

Roles and Responsibilities:

Customer engagements

- Preparation of Project proposals, business presentations etc
- Organize discussions and hold consultative deliberations with internal and external stakeholders, as and when required, to meet the customers' requirements.
- To represent C-DOT in various exhibitions to demonstrate & market / promote C-DOT products in exhibitions

Skills and Abilities:

- Telecom & IT technologies' awareness.
- Good knowledge and understanding of products and telecom technologies in general.
- Good communication, presentation, writing, organizing, planning, and creative kills, as required to draft several documents, follow-up mails, technical bids pertaining to business leads.
- Knowledge of tools & techniques office automation tools, ERP /& MIS, etc.
- Soft skills Good communication & writing skill,
- People skill soft-spoken, pleasing, disciplined, time-sensitive, capability to handle ambiguity, etc.

Minimum Qualifications:

• Min 65% in (10th, 12th, BE/B.Tech in Electronics & Communication Engineering / Computer Science or equivalent degree from a recognized college/university)

Eliqibility Criteria:

Project Name: PMG

Post Code: 51

No. of Post(s): 02

Location: New Delhi

Roles and Responsibilities:

- Annual Plan & Budget preparation strategic alignment of resources (financial, manpower planning) with the direction, as determined for the business and release of Annual Business Plan (ABP).
- Preparation of various project progress report in different required formats
- Audit co-ordination with C& AG auditor, statutory auditor, etc. for smooth carrying of project audit, involving replies to various queries raised, settlement of pending queries / paras, replies to inspection report, etc.
- Parliamentary affairs Replies to various queries related to projects under implementation, etc.

Skills and Abilities:

- Telecom & IT technologies' awareness.
- Knowledge of program management project planning & control, cost /schedule control system, etc.
- Knowledge of tools & techniques estimation, data analytics, office automation tools, ERP /& MIS, etc.
- Soft skills Good communication & writing skill,
- People skill soft-spoken, pleasing, disciplined, time-sensitive, capability to handle ambiguity, etc.
- Hands-on development experience in Java, enterprise Java applications; Oracle PostgreSQL preferred.

Minimum Qualifications:

• Min 65% in (10th, 12th, BE/B.Tech in Electronics & Communication Engineering / Computer Science or equivalent degree from a recognized college/university)

Eligibility Criteria:

Project Name: Lab Infrastructure Support

Post Code: 52

No. of Post(s): 03

Location: New Delhi

Roles and Responsibilities:

To meet the lab support requirements of lab users by:

- Ensuring availability of necessary hardware and software and other lab equipment
- Addressing any issues relating IP Networking, Faulty cards, Data configurations, Software versions etc.
- Maintaining and provisioning testing equipment for the users
- DC Power Plants/battery Banks Maintenance, Power provisioning support in Labs

Skills and Abilities:

- Basic Knowledge of IP Networking and Cabling, Optical connectivity
- Knowledge of Technologies like 4G, 5G, eNodeB/gNodeB is desirable
- Good Communication Skills

Minimum Qualifications:

• Min 65% in (10th, 12th, B.E. / B. Tech. in Electronics & Communication Engineering or equivalent degree from a recognized college/university)

Eligibility Criteria:

 0-3 years of professional work experience post qualification. Preference will be given to candidates having fixed and mobile (2G/3G/4G) telecom equipment deployment field experience.

<u>Project Name:</u> Face Recognition Back end applications

Post Code: 53

No. of Post(s): 09

Location: New Delhi

Roles and Responsibilities:

- Research & Development of appropriate ML algorithms to do face recognition
- Re-training of existing well-known models under face recognition
- Image pre-processing i.e. image enhancements
- Make predictive analysis and automation as per project requirements
- Identify appropriate data sets, data collection and data modeling.
- Statistical analysis of data sets to improve model pipeline
- Keeping abreast with the latest development in AI/ML
- Design & Development of quality software to enhance software reusability & scalability
- Code reviews and release management

Skills and Abilities:

- Experience of writing robust code in Python, NLP, Knowledge of Al/ML computer vision, Face Recognition algorithms
- Should have knowledge in access control using relays etc.
- Should have camera calibrations skills
- Familiarity with machine learning alogorithms and use of AI/ML frameworks such as tensorFlow or Keras
- Skills in high scale similarity search
- Skills to generate high quality image embeddings considerting the variety of faces in India
- Skills to write GPU based code to speed up the processing
- Skills in working embedded systems and their corresponding peripherals like speakers, Leds etc
- Working knowledge of MySQL and RDBMS
- Knowledge of fundamental mathematical concepts such as linear algebra and probability
- Knowledge of data structure & Algorithms, orbject-oriented design principles and best practice patterns and code profiling
- Familiarity with Linux environment for software development
- Knowledge of developing ChatBot shall be an added advantage
- Excellent problem solving and debugging skills
- Proficient in software version maintenance tools such as Git etc.
- Excellent communicator, team player who can work independently also

Minimum Qualifications:

 Min 65% in (10th, 12^{th,} BE/B.Tech in CSE/IT or equivalent degree from a recognized college/university)

Eligibility Criteria:

<u>Project Name:</u> Face Recognition Front end applications

Post Code: 54

No. of Post(s): 03

Location: New Delhi

Roles and Responsibilities:

- Identify and analysis of software requirements
- Design & Development of software modules using Android, Python
- Design & Development of quality software to enhance software reusability & scalability
- Coding, code reviews, unit testing and release management integration of Software modules & System Integration testing.

Skills and Abilities:

 Working knowledge in Flutter, Android Studio, Django, Flask, Python, Knowledge of Al/ML computer vision algorithms, React Postgres, MySQL

Minimum Qualifications:

 Min 65% in (10th, 12th, BE/B.Tech in CSE/IT or equivalent degree from a recognized college/university)

Eligibility Criteria:

Project Name: DIU/CIER/EIR

Post Code: 55

Name of Post: Database Engineer

No. of Post(s): 09

Location: New Delhi

Roles and Responsibilities:

• Experience/knowledge of RDBMS systems and its concepts.

- Experience/knowledge of RDBMS database technology- MySQL/ PostgreSQL.
- Experience/knowledge of RDBMS database administration.
- Experience/knowledge in writing optimized SQL queries.
- Experience/knowledge in backup and recovery of database system.
- Experience/knowledge of NoSQL database and its concepts.
- Experience/knowledge of MongoDB database administration in standalone, cluster mode.
- Experience/knowledge of MongoDB Sharing, Replication, Indexes
- Experience/knowledge of MongoDB Security, Transaction, Backup & recovery etc.
- Practical knowledge of database security and encryption
- Excellent communicator, team player who can work independently also.

Skills and Abilities:

- Experience/Knowledge of Linux basics, shell-scripting
- JAVA, SQL/No-SQL Databases.
- Experience/knowledge in writing applications using JAVA to load huge records in RDBMS/MongoDB database
- Knowledge of Linux basics, shell-scripting
 Tags: RDBMS, MySQL, PostgreSQL, NoSQL, MongoDB

Minimum Qualifications:

 Min 65% in (10th, 12th, BE/B.Tech in CSE/ITor equivalent degree from a recognized college/university)

Eligibility Criteria:

Project Name: DIU/CIER/EIR

Post Code: 56

Name of Post : GUI/Web Designer & Developer

No. of Post(s): 07

Location: New Delhi

Roles and Responsibilities:

Identify and analysis of software requirements

- MVC based web application design and development.
- Design, Development, testing and debugging of back-end software in Java
- Design & Development of quality software to enhance software reusability
 & scalability Design and development of API structure
- Coding, Code reviews, Code optimization, unit testing and Release management
- Integration of Software modules & System Integration testing, Load and performance testing.
- Contribute to all phases of the development lifecycle and hands-on with distributed computing systems.

Skills and Abilities:

- Hands on experience with programming languages and Web Development Technologies (Java, JavaScript, PHP and Python, JQuery, Ajax, Javascript, HTML5, CSS)
- WEB Services (SOAP, REST)Knowledge of Spring Boot, Spring Framework and understanding of Web Application framework (Express Framework)
- In-depth knowledge of data structure & algorithms and its application in software design & development
- Web security
- Experience with container based application development and troubleshooting, testing and maintenance of the existing software, including applications, databases, interfaces and new functionalities. Containerization and Container Orchestration tools (Docker & Kubernetes), Architecting Micro service applications.
- Knowledge of Databases (MySql, PostgreSQL, Cassandra, Redis, Mongo DB)

- Parallel Data Processing Engines (Apache Spark).
- Experience with Cloud Environments like AWS / Azure / GCP.
- Knowledge of Testing & debugging tool and version control system(GIT)
- Knowledge of web server configuration for Wildfly, Tomcat.
- Knowledge of IDE (Netbeans, Eclipse, IntelliJ, SpringTool Suite, VSCode)
- · Excellent communicator, team player who can work independently also

Minimum Qualifications:

 Min 65% in (10th, 12th, BE/B.Tech in CSE/IT or equivalent degree from a recognized college/university)

Eligibility Criteria:

Project Name: DIU/CIER/EIR

Post Code: 57

Name of Post: Mobile application development

No. of Post(s): 04

Location: New Delhi

Roles and Responsibilities:

- Working knowledge in Android and iOS app development using React Native / Flutter Framework.
- Experience with Android SDK and working with remote data via REST and JSON.
- Knowledge of iOS, iPad, C++, Objective C, iPhone SDK, Xcode, Swift and Cocoa Touch
- Work with Java-script, React Native / Flutter for App Development
- Working knowledge of the general mobile landscape, architectures, trends, and emerging technologies
- Experience in live app operation, maintenance and update
- Publishing of mobile apps on Play Store and App Store.

Skills and Abilities:

- Java-script, Mobile App, iOS, Android, React Native.
- React Native Framework , Flutter framework
- REST, JSON, iOS, iPad, C++, Objective C, iPhone SDK, Xcode,
- Swift and Cocoa Touch Hosting App in Play store and App Store

Knowledge of Databases (MySql, PostgreSQL, Cassandra, Redis, Mongo DB)

Minimum Qualifications:

 Min 65% in (10th, 12th, BE/B.Tech in CSE/IT or equivalent degree from a recognized college/university)

Eligibility Criteria:

Project Name: DIU/CIER/EIR

Post Code: 58

Name of Post(s): Back-end Application development

No. of Posts: 06

Location: New Delhi

Roles and Responsibilities:

• Design & Development of optimised quality software to enhance performance, reusability & scalability.

- Code reviews and release management
- Load and performance testing techniques
- Tester s/w development and testing
- Development of IP packet/ message processing application, testing and debugging.

Skills and Abilities:

- Proficiency in Programming Languages C/C++, Python
- Good understanding of Linux and Shell Scripting
- Deep understanding of data structure and operating system
- Deep understanding of Protocols TCP/IP, UDP, SNMP; inter-process communication (IPC) and Socket programming in multi-threaded environment.
- Experience/Knowledge of Protocols SIP, SIGTRAN, Diameter, MAP and ISUP signalling.
- Experience/Knowledge of design, development and integration of software modules
- Practical knowledge of system architectures, networking and embedded systems
- Knowledge of database MySQL/ Redis/ Mongo
- Knowledge of compilation and debugging tools
- Practical knowledge of application security and encryption
- Experience with container based application development and troubleshooting, testing and maintenance of the existing software, including applications, databases, interfaces and new functionalities. Containerization and Container Orchestration tools (Docker & Kubernetes), Architecting Micro service applications.
- Excellent communicator, team player who can work independently also.

Annexure-1	

Minimum Qualifications:

• Min 65% in (10th, 12^{th,} BE/BTech in CSE/IT or equivalent degree from a recognized college/university)

Eligibility Criteria:
0-3 years of professional work experience post qualification

Project Name: DIU/CIER/EIR

Post Code: 59

Name of Post: Image Analysis AI/ML

No. of Posts: 04

Location: New Delhi

Roles and Responsibilities:

- Research & development of appropriate ML algorithms to analyze huge image data, feature extraction and automation as per project requirements.
- Image pre-processing & cleaning. Synthetic data generation.
- Keeping abreast with the latest development in AI/ML.
- Design & Development of quality software to enhance software reusability & scalability.
- · Code reviews and Release management.

Skills and Abilities:

- Experience of writing robust code in Python and other machine learning languages.
- · Deep understanding of AI/ML algorithms.
- Knowledge of deep neural network algorithms.
- Knowledge of image searching algorithm on big data such as FAISS /elastic search preferred.
- Working knowledge of AI on different computation platforms like GPU/CPU.
- Knowledge of data structure & algorithms, object-oriented design principles and best practice patterns and code profiling.
- Familiarity with both environment Linux as well as windows for software development.
- Knowledge of distributive architecture and clusters preferred.
- Knowledge of SQL & NoSQL database like MongoDb, MySQL etc
- Knowledge of computer languages like C, C++, java.
- Excellent problem solving and debugging skills.
- Proficient in software version maintenance tools such as GIT, CVS.
- Practical knowledge of application security and encryption
 Excellent communicator, team player who can work independently also.

Minimum Qualifications:

• Min 65% in (10th, 12th, BE/BTech in CSE/IT or equivalent degree from a recognized college/university)

Eligibility Criteria:

Project Name: IPR/KMG

Post Code: 60

No. of Post(s): 01

Location: New Delhi

Roles and Responsibilities:

- Support for IPR filing, prior art & record keeping
- Training organization & management
- Maintenance of Learning Management System(LMS) software & training portal

Skills and Abilities:

- Well conversant with IPR (Patents, Copyright...) & patentability aspects
- Proficient in MS-Office (Excel, Word etc)
- Working knowledge of web development (PHP,MySQL,Apache,HTML/CSS,Linux...)
- Good inter-personal, communication & drafting skills.

Minimum Qualifications:

 Min 65% in (10th, 12th, BE/BTech in CSE/ECE or equivalent degree from a recognized college/university)

Eligibility Criteria:

Project Name: M2M Communication-Devops

Post Code: 61

No. of Post(s): 1

Location: New Delhi

Roles and Responsibilities:

- Devop Activities like Implementing various development, testing automation tools involving C-DOT IoT platform CCSP.
- Having the technical skill to review, verify and validate the software code developed in the project.
- Trouble shooting techniques and fixing the code bugs etc.

Skills and Abilities:

- Expert Knowledge of Database (any relational SQL DB),
- Good Knowledge of
 - Shell scripting, Automation scripts
 - Docker containers/Kubernetes
 - Jenkins, Junit, Selenium
 - Java
 - GIT
 - Microservices
 - Springboot
 - RESTful APIs

Minimum Qualifications:

• Min 65% in (10th, 12th, BE/BTech in CSE/ECE/IT/Instrumentation or equivalent degree from a recognized college/university)

Eligibility Criteria:

Project Name: M2M Communication

Post Code: 62

Name of the Post: Backend development Profile

No. of Post(s): 5

Location: New Delhi

Roles and Responsibilities

• Enhancements in IOT Platform

- REST API based development
- · Perform functionality testing, integrated testing

Skills and Abilities:

- Should have expert Knowledge in
 - OOPs concepts, Data structures and Algorithms
 - Microservices ,maven
 - Junit
- Good Knowledge of
 - Java, J2EE
 - Application and web server
 - Eclipse, GIT
 - RESTful APIs
 - XSD, JSON/XML
- Hands on any SQL DB
- May have knowledge of
 - Docker containers/Kubernetes
 - PKI, TLS Security
 - DTLS

Minimum Qualifications:

 Min 65% in (10th, 12th, BE/BTech in CSE/ECE/IT/Instrumentation or equivalent degree from a recognized college/university)

Eligibility Criteria:

Project Name: PM-WANI Service Delivery

Post code: 63

No. of Post(s): 03

Location: New Delhi

Roles and Responsibilities:

Software Installation/Configuration of Access Point and Field Work for PM-WANI

- Software Release installation (GUI and CLI based)
- Network configuration with respect to TSP/ISP/as per site requirement, Testing and Acceptance Testing as per the customer requirement.
- Provide support after installation.
- Mobile App testing
- Training for operation and maintenance to customer.
- Require extensive traveling for field deployment.
- To provide extensive support to PDOAs and APP providers in day-to-day operation and maintenance.

Skills and Abilities:

- Knowledge of IT and Linux based server, Bash script/AWS/Azure GCC
- Knowledge of fundamental of IP/LAN/WAN/CCNA certification /Wi-Fi technology.
- Knowledge of Linux based system/remote installation and support to customer

Minimum Qualifications:

• Min 65% in (10th, 12th ,B.E/B.Tech in ECE/CSE/EEE/IT or equivalent degree from a recognized college/university).

Eliqibility Criteria:

• 0-3 years of professional work experience post qualification. Experience in Software Installation/telecom Solution/IT service sector will be given preference.

<u>Project Name</u>: PM-WANI Central Registry Maintenance

Post code: 64

No. of Post(s): 02

Location: New Delhi

Roles and Responsibilities:

PM-WANI Central Registry Related Activity

- · Operations and Maintenance of Cloud based server
- Management of filed and customer issues.
- Provide support to clients.
- Training for operation and maintenance of network.
- Coordination with DOT HQ and State LSA for PM-WANI Proliferation and training to field staff.
- Deployment of PM-WANI for Tourism sites, ASI, Smart City, Hospitals etc.

Call Centre and Certification Related Activity:

- To provide extensive support to PDOAs and APP providers in day-to-day operation and maintenance.
- 24x7 Call-Centre support through mobile operator
- Full-fledged Control Room / Helpdesk between 9 AM to 8 PM.
- Certification of PDOA stack and APP along with the preparation of reports.

Skills and Abilities:

- Knowledge of IT and Linux based server/Bash script/html/AWS/Azure GCC and fundamental of IP/LAN/WAN/CCNA certification /Wi-Fi technology.
- Knowledge of Linux based system/remote installation and support to customer

Minimum Qualifications:

• Min 65% in (10th, 12th, B.E/B.Tech in ECE/CSE/EEE/IT or equivalent degree from a recognized college/university).

Eliqibility Criteria:

• 0-3 years of professional work experience post qualification. Experience in Software Installation/telecom Solution/IT service sector will be given preference.

