Corrigendum- I dtd: 25.05.2022

RailTel's Bid Specific Additional Terms & Conditions

Information to Bidder for the "Procurement of Switches for Customer Delivery"

Ref: GeM Bid No. GEM/2022/B/2125179 Dated 11.05.2022

- The item/items in this bid should be quoted as per the technical specifications. *The details of the specifications along with consignee/site details are also available on website www.railtelindia.com*

1. In the specification wherever support for a feature has been asked for, it will mean that the feature should be available without RailTel requiring any other hardware/software/licenses. Thus, all hardware/software/licenses required for enabling the support/feature shall be included in the offer. The technical specifications are mentioned in **Annexure-I**.

2. OEM or Authorized distributor/Partner of OEM should have a registered office in India to provide sales and 24x7 support in India. The certificate to this effect should be submitted. The bidder should be either OEM or his authorized dealer/distributor.

3. In case of the authorized distributor/partner certificate from the OEM to this effect should be submitted.

4. Equipment offered shall have complete data sheets and detailed description on OEM web sites. Bidder shall provide the complete details in their bid.

5. Bidder shall submit the detailed BOM of the equipment offered duly verified and certified by the respective OEM. Unpriced BOM shall be submitted by bidder in their technical bid and priced BOM in their price bid. The bidder shall also attach unit Rate analysis of Schedule of Requirement (Cost of each sub-assembly, card, module, License, supervision of I&C charges etc.) in their Price bid. The quoted unite rates should correspond to the referred unit rate. Priced BOM/SOR submitted with technical bid will be summarily rejected.

6. GSTIN ID of vendor should be provided from where goods will be supplied.

7. **Delivery Period, Consignee Address and inspection**

7.1 **Delivery Period:** The supplier will have to supply the material within 30 days from the date of issue of confirmed PO. If material is not supplied within the approved delivery period then penalty of 0.5% of undelivered/uninstalled quantity per week to the maximum to the 10% of the contract value will be levied.

Note: Supplier should also submit internal test report, guarantee and fitment certificate along with the supply of materials.

7.2 Consignee Address:

S.No.	Consignee	Consignee Address	RailTel Region	Items to be
1	Sr. Mgr/Stores RCIL/Mumbai	RailTel Office, Mumbai	Western Region	All Qty.

7.3 Inspection:
Post Receipt Inspection at consignee Site before acceptance of stores: Nominated RailTel Executive by CA.

8. Estimated cost of tender & Earnest Money Deposit (EMD):

8.1 **Estimated cost of tender:** Estimated cost of the Tender is **Rs.41,24,537/-** (Incl. GST).

8.2 **Earnest Money Deposit (EMD): Rs.82,491/-** with Payment online through RTGS/ internet banking in Beneficiary name RailTel Corporation of India Limited Account No. 11037321307, IFSC Code SBIN0001821, Bank Name: State Bank of India, Branch address: Churchgate Branch, Maharshi Karve Marg, Mumbai- 400 020.

8.2.1 Earnest Money shall be exempted to Micro and Small enterprise (MSEs) registered for the tendered items.

8.2.2 **The Bid received without EMD/ documentary proof of exemption of EMD as per above clause 8.2.1 will be summarily rejected.**

9. This bid complies with "Public Procurement (preference to make in India) Policy Order, 2017 or latest issued by DIPP and Public Procurement Policy for Micro and Small Enterprises (MSEs) order,2012" or latest issued by MoSME."

The bidders claiming the preference have to submit relevant documents prescribed under relevant order.

10. Security Deposit/Performance Bank Guarantee:
The successful tenderer shall submit security deposit in the form of DD or irrevocable Bank Guarantee from any scheduled bank for due fulfillment of contract as per the details given below:

i. Security Deposit/Performance Bank Guarantee @ 3% of total value of Purchase Order is required to be submitted within 30 days of issue of Purchase Order with validity of 3 months beyond warranty period, failing which a penal interest of 15% per annum shall be charged for the delay period i.e. beyond 30 (thirty) days from the date of issue of LOA/PO. PBG format specified in **Annexure-V**

ii. The security deposit/PBG shall be submitted to RCIL/WR, Mumbai.

iii. A separate advice of the BG will invariably be sent by the BG issuing bank to the RailTel's Bank through SFMS and only after this the BG will become acceptable to RailTel. It is therefore in own interest of bidder to obtain RailTel's bank IFSC code, its branch and address and advise these particulars to the BG issuing bank and request them to send advice of BG through SFMS to the RailTel's Bank.

The security deposit/Performance Bank Guarantee shall be released after successful completion of Contract obligations under the contract, duly adjusting any dues recoverable from the successful tenderer. Payment of Security Deposit in the form of Pay Order/Demand Draft should be made in favor of "RailTel Corporation of India Ltd" payable at Mumbai.

Note:

1. Any Performance security upto a value of Rs. 5Lakhs is to be submitted through online transfer only
2. No interest shall be paid on the amount of Performance Security held by RailTel, at any stage.

11. Eligibility Criteria for OEM:

- The Equipment offered by the OEM or equipment of the same series/family (an undertaking by the OEM has to be submitted in support incase of immediate predecessor) from the same OEM should have been satisfactorily working in Government/PSUs/Telecom Service Providers network for at least 12 months as on opening of bid, in India or Abroad. The certificates from the actual users will have to be submitted online. OEM shall also submit proper contact detail of clients (Firm Name, Contact person, Designation, Telephone Number, Fax, Official mail id etc.).

- The OEM should have supplied at least 35% of the tendered value of the equipment offered or equipment of the same series/family during last preceding 3 financial years (i.e. current year and three previous financial years) as on opening of bid to Government/PSUs/Telecom Service Providers. OEM should submit self-certificate with proper contact detail of clients along with quantities supplied (Firm Name, Contact person, Designation, Telephone Number, Fax, Official mail id etc.). The same should be issued by authorized signatory.

- The OEM should have proven facilities for Engineering, manufacture, assembly, integration and testing of Data Network equipment and basic facilities with respect to space, Engineering, Personnel, Test equipment, Manufacture, Training, Repair, Service Center Supports for at least past three years in the country from where the proposed equipment are planned to be supplied. In case OEM is located outside India, it should have training repair and service center facilities in India also. The certificates/Undertaking for the same will have to be submitted online.

(The bidder will have to submit the proof of establishment for the facility)

- All the documents of the OEM should be in English/Hindi languages only. Document other than English/Hindi will not be entertained. However, Technical Specifications and details should be in English only.

- OEM should not have been banned/blacklisted by any Govt/Semi Govt./PSU/State Govt./Any Telecom entity in India for the supply of the material. An undertaking to this effect signed by the authorized signatory to be submitted by the OEM.

12. Eligibility Criteria:

12.1 **Technical Eligibility for Bidder:**

The tenderer must have successfully completed any of the following during last 07 (seven) years, ending last day of month previous to the one in which tender is invited:

- Three similar works each costing not less than the amount equal to 30% of advertised value of the tender, or
- Two similar works each costing not less than the amount equal to 40% of advertised value of the tender, or
- One similar work each costing not less than the amount equal to 60% of advertised value of the tender.

 # Similar Work- Supply /Supply and installation of MPLS Switch with satisfactory working in Government/PSUs/Telecom Service providers/Public Listed Company in India or outside India.

Note: Work experience certificate from private individual shall not be considered. However, in addition to work experience certificates issued by any Govt. Organization, PSU or any reputed TELCO, work experience certificate issued by Public listed company having average annual turnover of Rs.500 crore and above in last 3 financial years excluding the current financial year, listed on National Stock Exchange or Bombay Stock Exchange, incorporated/registered at least 5 years prior to the date of opening of tender, shall also be considered provided the work experience certificate has been issued by a person authorized by the Public listed company to issue such certificates.

In case tenderer submits work experience certificate issued by public listed company, the tenderer shall also submit along with work experience certificate, the relevant copy of work order, bill of quantities, bill wise details of payment received duly certified by Chartered Accountant, TDS certificates for all payments received and copy of final/last bill paid by company in support of above work experience certificate.

12.2 **Financial Criteria for Bidder:**
The bidder should have minimum cumulative turnover of 150% of tendered value or above during the last 3 financial years (i.e. current year and/or three previous financial years). The bidder should provide Audited Balance Sheets / annual reports as documentary evidence and for current year, the Statutory Auditor's certificate for turnover of current year up to the date of bid opening for which Balance Sheet/P&L may not be available. In case of photocopy of Balance Sheet/P&L the same should be certified by Chartered Accountant as true copy.

12.3 Bidder should have authorization specific to this tender from respective OEM as per **Annexure-III**.

12.4 The bidder should have registered office in India for a minimum period of 3 years as on schedule date of bid opening. Certificate of incorporation will have to be submitted.

12.5 The bidder or their promoters having equity stake or operating partnership in bidder, should not be holding valid License for Telcom Service Provider/ISP/NLD, Services License of Government of India for Telecom Operation.

12.6 Bidder should not have been banned/blacklisted by any Govt./Semi Govt./PSU/State Govt./Any Telecom entity in India for the supply of the material. An undertaking to this effect signed by the authorised signatory to be submitted by the Bidder.

13 Splitting of Quantity: Not Applicable.

14 Evaluation Criteria:

i. The bidder shall quote the equipment prices as per the price format given in the tender.

ii. Bidder should quote for all the items. Non-quoting for all items will be render the bid invalid and will not be considered for evaluation. The Offers will be evaluated on total cost including Long Term Maintenance Cost as quoted if applicable.

iii. The offers for respective Item will be determined on Total Unit Rate on CIP destination basis which will include basic rate, GST, freight, insurance and any other charge or cost quoted by the tenderer.

iv. Offers from the tenderers not meeting the eligibility criteria will not be considered.

v. Any optional item/modules, accessories etc. required for meeting the tender criteria may be quoted separately, if required. The bidder should indicate brand name, type / model number of the material offered.

15. Variation of Quantities at the Time of Award

The purchaser reserves the right to increase or decrease the quantity to be ordered up to 30 percent at the time of placement of contract. The purchasers also reserves the right to increase the ordered quantity by up to 30% of the contracted quantity during the currency of the contract at the contracted rates. Bidders are bound to accept the orders accordingly.

16. Warranty:

The materials are to be warranted for **3 years** from date of delivery to the consignee. The tenderer shall warrant that stores to be supplied shall be new and free from all defects and faults in material, workmanship and manufacturing and shall be of the highest grade and consistent with the established and generally accepted standards of materials of the type ordered and shall perform in full conformity with the specifications and drawings.

The supplier shall be responsible for any defects that may develop under the conditions provided by the contract and under proper use, arising from faulty materials, design or workmanship such as corrosion, inadequate quantity of material to meet equipment requirements, inadequate contact protection, deficiencies in design and/ or otherwise and shall remedy such defects at his own cost when called upon to do so by the Purchaser who shall state in writing in what respect the stores are faulty.

17. Long Term Maintenance Support: <u>(Not applicable for this Bid)</u>

Tenderer (OEM) shall provide maintenance support after successful completion of the warranty obligations for a minimum period of 5 years. The long term maintenance support shall be comprehensive and include all hardware and software of equipment supplied against this contract. RailTel should be extended the benefits of periodical software patches/updates made by OEM on the system from time to time for equipment security/performance without any additional cost to RailTel.

Buyer reserves the right to enter into Long Term Maintenance @ 3.5% of ordered value of equipment after expiry of warranty period.

Bidder/OEM, shall be paid @ 3.5% of supply cost per annum towards Long Term Maintenance Support after completion of warranty period, to undertake repairs/replacements of all type of module/ card/assembly/ subassembly and update/upgrade of software released during this period and /or which may fail in the network after the warranty. Only incremental cost in % over and above this, if perceived by the OEM and Tenderer, may be indicated in Schedule of Requirement. AMC cost for 5 years shall be added towards evaluation of tender. If however the tenderer feels that his AMC Cost is less than 3.5% per annum, he should give suitable discount in equipment pricing and for AMC he will be paid @ 3.5% per annum. If the Tenderer quotes a higher base rate for AMC, he will be paid at his quoted rate per annum. AMC would have to be valid for minimum period of 5 years after the warranty.

Separate agreement for AMC after warranty period shall be entered with OEM or Bidder specifically authorized by OEM by RailTel. A fresh Bank Guarantee for a value of 10% of the value of the AMC contract's 5 years value valid for a period of 64 months (4 months beyond the AMC period of 5 years) from the date of issue of LOA shall be required to be submitted by Bidder/OEM for due fulfillment of long term maintenance support obligation. This PBG of AMC shall be submitted by the bidder within 30 days from the date of issue of LOA for the AMC. In case bidder does not submit the PBG in the stipulated time period, RailTel may encash the PBG given with the original LOA.

Quarterly payment for AMC Charges as per the Service Level Agreement (SLA) at the end of every quarter would be made by RailTel after successful completion of AMC Services of that quarter and on the certificate furnished by concerned RailTel representative.

Note:

1. The acceptance of the above clause is mandatory and specific acceptance from OEM is required to be enclosed as per Annexure-II. Any deviation / non acceptance will lead to rejection of the bid.

2. Any Performance security upto a value of Rs. 5Lakhs is to be submitted through online transfer only.

3. No interest shall be paid on the amount of Performance Security held by RailTel, at any stage.

18 Repair and Return Services applicable for Warranty Period (Clause No. 16) as well as Long Term Maintenance Support (Clause No. 17)

18.1 Repair

18.1.1 Contractor's Responsibility:-

- The Contractor will take-over the defective equipment/component from station/site and hand-over the repaired equipment/component at the same location. The following activities will be performed by the contractor:

- After receiving a defective part request through Welcome Centre (dedicated phone line or e-mail), the defective equipment/component will be taken over by the contractor from each of the station. All the documentation including identification number (Serial number) will be provided by RailTel.

- There will be initial one time activity of all existing faulty equipment/component being repaired by Contractor before commencement of the AMC. AMC will cover only equipment which are in working condition. **(Not applicable for the Bid)**

- **Delivery Period:** The received defective part will be got repaired by the contractor within 30 days from the date of receiving and will be handed over

to RailTel authorized representative at station/site. The contractor will also give probable reason for repeated failure of equipment/component/ modules.

Uninterrupted Network: For smooth and uninterrupted traffic during the repair being carried out by the contractor.

1. RailTel will provide its own spares in the first instance for the defective equipment where spares have been procured as per the SOR. For remaining items contractor shall make spares available at his own cost.

2. If contractor fails to return the repaired equipment/module/card/SFP/part within stipulated time of 30 days from the date of receipt then the OK (good conditioned) equipment/cards/SFPs/parts etc. will be provided by the contractor for the subsequent time period free of cost till replacement is made with the repaired equipment/module/card/SFP/part.

3. All transportation, freight and insurance charges will be borne by the contractor.

4. Contractor will keep the record of repair on each defective equipment/part/cards/SFP/components with serial numbers (unique identification) particulars.

18.1.2 **RailTel Responsibility**

RailTel will hand over the equipment/defective card/SFP/Parts/etc. to the contractor's authorized representative at each of the station/site along with the following relevant information & documentation.

- Identification/serial number and location of use.
- Fault report document duly filled-in in a format as per requirements of Contractor.
- All relevant documentation including failure description, diagnostic tests results.
- Adequate packing material to protect against reasonable risk of damages.
- Provide all necessary government authorization and documentation necessary to facilitate custom clearance processing.
- Perform a physical check test on the repaired parts.

18.2 **Return**

If any part goes beyond repair due to Contractor at the time of repair being carried out, this is to be communicated to RailTel and after agreed upon, it will be labeled as "unworkable". If it will be required to deploy a new equipment/part on that location that will be provided by the contractor free of cost. To achieve this, contractor is required to always keep adequate spares with it during the period of AMC. However this excludes damaged, spoiled, rusted or misused equipment/parts. Any such equipment/parts will be not-repairable and no replacements shall be provided by contractor. RailTel will have to purchase fresh

spares in case the equipment/cards are non-repairable due to any of these above mentioned reasons.

18.3 **If the contractor fails to return the equipment/accessories within 30 days, the following penalties will be imposed:**

Equipment	Duration of repair	Deduction/Penalties
All Equipment/Module and accessories	More than 30 days and upto 40 days (from the date of receipt)	10% of the cost of affected equipment/module
All Equipment/Module and accessories	More than 40 days and upto 50 days (from the date of receipt)	25% of the cost of affected equipment/module
All Equipment/Module and accessories	More than 50 days and upto 60 days (from the date of receipt)	75% of the cost of affected equipment/module
All Equipment/Module and accessories	More than 60 days (from the date of receipt)	Full cost of affected equipment/module

Contractor can deposit the penalty with the Buyer directly else the Buyer shall have a right to recover all such penalty amount from the Performance Security (PBG) or from the running bills.

19. Payment Conditions:-

(i) 100% payment against full supply.
(ii) 80% payment against part supply. In case bidder completes the supply order for one SOR, he can claim part payment of 80% against each SOR's completed supply of the said SORs. Balance payment shall be made after full supply.
(iii) The following documents are to be submitted for payment:

- Original Tax Invoice. (With separate Tax amount, containing POS, RailTel GSTN and Supplier GSTN).
- Delivery Challan
- Original Consignee receipt with GRN No.
- Original Inspection Certificate
- Transit Insurance Certificate
- Warranty Certificate of OEM
- Copy of BG/Proof of BG Submission
- Certificate of receipt of Goods in good condition from RailTel

20. The tenderers shall submit a notarized affidavit on a non-judicial stamp paper stating that they are not liable to be disqualified and all their statement/documents submitted along with bid are true and factual. Standard format of the affidavit to be submitted by the bidder is enclosed as **Annexure-IV**. **Non submission of an affidavit by the bidder shall result in summarily rejection of his/their bid**. And it shall be mandatorily incumbent upon the tenderer to identify state and submit the supporting **documents duly self-attested** by which they/he is qualifying the Qualifying Criteria mentioned in the Tender Document. It will not be obligatory on the part of Tender Committee to scrutinize beyond the submitted document of tenderer as far as his qualification for the tender is concerned.

The RailTel (RCIL) reserves the right to verify all statements, information and documents submitted by the bidder in his tender offer, and the bidder shall, when so required by the RailTel (RCIL), make available all such information, evidence and documents as may be necessary for such verification. Any such verification or lack of such verification by the RailTel (RCIL) shall not relieve the bidder of its obligations or liabilities hereunder nor will it affect any rights of the railway thereunder.

In case of any wrong information submitted by tenderer, the contract shall be terminated. Performance Guarantee (PG) of contract forfeited and agency barred for doing business on RailTel (RCIL).

21. Online Submissions:

The bidder is required to upload and submit the following documents on line before due date & time of bid. The due date & time for closing of the bid as per GeM Bid and the bid will be opened as per GeM Bid.

(i) EMD
(ii) BOQ of offered equipment and unit rate analysis.
(iii) Clause wise compliance along with all mentioned documents/annexures for all clauses of GeM Bid and ATC (Information to bidder) documents.
(iv) Data Sheet of offered equipment.
(v) Financial (Certified copies of audited balance sheets/annual reports of last three preceding financial years) and Technical Eligibility Criteria documents.
(vi) Technical Compliance of all Specification of items as per ATC documents.
(vii) Undertaking of Long Term Maintenance Support from OEM as per para Annexure-II. **(Not Applicable for this bid)**
(viii) Proof of document required against Eligibility criteria of OEM and Bidder vide para 11 & 12 respectively.
(ix) MAF/OEM Authorization as per **Annexure-III**.
(x) Notarized affidavit on a non-judicial stamp paper as per **Annexure-IV**.
(xi) Duly notarized Power of Attorney in name of authorized signatory as per Clause No. 25.

22. Offline submission:

Original copy of documents shall be submitted by tenderer offline at RailTel Corporation of India Western Railway Microwave Complex, Senapati Bapat Marg Mahalaxmi (West) Mumbai - 400013 at any point of time whenever asked for verification. Incase original are not produced before due date, bid may be rejected.

23. Make in India

The provisions of the Public Procurement (Preference to Make in India) Order 2017 dated June 15, 2017 (or subsequent revisions, if any) by Department of Industrial Policy and Promotion, GoI shall apply to this tender to the extent feasible. Minimum Local Content for SOR items shall be 60% for purchase preference as per the Notification No. 18-10/2017-IP dated 29th August 2018 issued by Department of Telecommunications, Ministry of Communications or as per the latest notification for FY 2020-21. Bidder shall be required to give a self-certification in his bid that the item offered meets the local content and shall give details of the location(s) at which the local value addition is made. Further the bidder shall provide a certificate from the statutory auditor or cost auditor of the company (in the case of companies) or from a practicing cost accountant or practicing chartered accountant (in respect of suppliers other than companies) giving the percentage of local content. In case of any false declaration, action shall be taken in line with the provisions of the PPP-MIII order.

24. Insurance

24.1 The Contractor shall take out and keep in force a policy or policies of insurance from the date, the delivery of material starts (including the transit portion) against all liabilities of the contractor or the Purchaser. The contractor shall take out and keep in force a Policy or policies of Insurance for all materials covered in schedule of requirement irrespective of whether used up in the portion of work already done or kept for the use in the balance portion of the work until such material are provisionally handed over to RailTel. The contractor should ensure the stores brought to site, against risks as required under the Emergency Risk (Goods) Insurance Act in force from time to time up to contract value.

24.2 It may be noted that the beneficiary of the insurance policy should be RailTel or the policies should be pledged in favor of RailTel. The contractor shall keep the policy/policies current till the equipment are handed over to the purchaser.

25 Constitution of Firm and Power of Attorney

25.1 Any individual(s) signing the tender or other documents connected therewith should specify whether he is signing:-

(a) As sole proprietor of the concern or as attorney of the sole Proprietor.
(b) As partner or partners of the firm.
(c) As a Director, Manager or Secretary in the case of Limited Company duly authorized by a resolution passed by Board of Directors or in pursuance of the authority conferred by Memorandum of Association.

25.2 In the case of a firm not registered under the Indian Partnership Act, all the partners or the attorney duly authorized by all of them should sign the tender and all connected documents. The original Power of Attorney or other documents empowering the individual or individuals to sign should be furnished to the Purchaser for verification, if required.

25.3 The RailTel will not be bound by Power of Attorney granted by the tenderer or by the changes in the composition of the firm made subsequent to the execution of the contract agreement.

25.4 In case where Power of Attorney partnership deed has not been executed in English, the true and authenticated of copies of the translation of the same by Advocate, authorized translators of Courts and licensed Petition Writers should be supplied by the contractor(s), while tendering of the work.

25.5 The duly notarized Power of Attorney shall be submitted in original at the time of bid submission as per Clause 22 above.

Note: 1) The bidder is required to give acceptance of all the clauses of **GeM bid, ATC** and RailTel's Bid Specific **ATC** document. Any deviation / non-acceptance may lead to rejection of the bid.

2) Information to Bidder viz. corrigendum /addendum/ amendments etc. for this bid shall be posted on www.railtelindia.com and GeM only.

3) This bid is governed by the Specific Additional Terms & Conditions and General Terms & Conditions laid down by the GeM against **GeM Bid No: GEM/2022/B/2125179.**

4) After opening of the technical bid no correspondence/submission of document made at the initiative of the bidder will be entertained. However, the purchaser can, if required, ask for clarifications in writing which need to be submitted before a target date. The clarifications submitted as required by the purchaser before the target date will be considered.

In case, if any contradiction between GeM Bid, Additional Terms & Conditions, RailTel's Bid Specific Additional Terms & Conditions and General Terms & Conditions, RailTel's Bid Specific Additional Terms & Conditions will prevails.

Annexure-I

Technical Specification

1. With 3 years warranty. The product should not be declared EOL or EoS by OEM for next 8 Years.
2. Equipped with necessary hardware/software to comply all above required / support features.
3. Back to Back warranty with respective OEMs for both Hardware and Software. The certificates/Undertaking for the same will have to be submitted along with bid from respective OEM.
4. UL,CE and FCC Certification is not required for PMA. However they have to produce certificate from standard lab approved/ authorized by Govt. of India that their product are equivalent to UL,CE and FCC and meets all standard and specification of UL,CE and FCC.

S. N.	Description of Item	Unit	Quantity
SOR-1	Switch Type -I as per specification	Nos.	11
SOR-2	Switch Type- II as per specification	Nos.	34
SOR-3	Switch Type -III as per specification	Nos.	7

Schedule of Requirement (SOR) wise technical Specification:

SOR item 1: Switch Type I

	Specification:
1	The LAN switch shall be standalone / rack mountable with the following ports:
2	20 Nos. 10G SFP+ and 2 Nos. QSFP+ 40G ports.
3	The switch should support RJ-45 console port and industry standard CLI
4	**Existing Clause:** The switch should support Reset button to make switch reset to default. **Amended clause:** **The switch should support reset option to make switch reset to default.**
5	The switch should support RJ-45 management port

6	Switch should have 02 power supply in 1+1 in redundant mode. It should support type (-48v DC supply) of power source supply on a Single Power Port.
7	**General Specification:**
8	The LAN Switch should support below specs Min 256MB RAM, 16MB flash, 1.5MB buffer.
9	The LAN switch shall be available with minimum Switching Fabric. 128 Gbps
10	The LAN switch shall have minimum packet forwarding rate at 64-byte packet length 95 Mpps
11	The LAN switch shall support minimum 16K MAC address.
12	The LAN switch shall support 1024 static MAC address entries
13	The LAN switch shall have 1K IGMP and 1K MLD snooping groups.
14	Switch should support Dying Gasp for quick trouble shooting during power failures or system shut downs.
15	**Layer-2 Features:**
16	The LAN switch shall support IEEE 802.1Q VLAN up to 255 Active VLANs and 4094 VLAN ID.
17	It shall support for Automatic Negotiation of link speed and duplex to help minimize the configuration & errors.
18	It shall support centralized VLAN Management. VLANs created on the Core Switches shall be propagated to all the other switches automatically, thus reducing the overhead of creating / modifying / deleting VLANs in all the switches in turn eliminating the configuration errors & troubleshooting. It shall support GVRP / VTP for VLAN pruning and management.
19	It shall support edge port in STP, RSTP, MSTP (16 instances), PVST+ mode, BPDU filtering.
20	It shall support 802.1d, 802.1p, 802.1Q, 802.1s, 802.1w, 802.1x,802.3x, 802.1ab.
21	It shall support spanning-tree root guard and loop guard to prevent other edge switches becoming the root bridge.
22	It shall support IGMP snooping v1, v2 and v3, IGMP Proxy , IGMP Qurier and MLDv1, MLD Qurier.
23	It shall support Link Aggregation Protocol (LACP) as per IEEE 802.3ad and and 8 groups per device/8 ports per group.
24	It shall Support for Detection of Unidirectional links and to disable them to avoid problems such as spanning tree loops and support Unidirectional Link Detection (UDLD) or any other industry equivalent protocol
25	It shall have supports L2/L3/L4 QoS/CoS solutions help ensure that critical network services such as VoIP, ERP, Intranet, and video conferencing are served with proper priority.
26	It shall support unknown unicast and multicast port blocking to allow tight control by filtering packets that the switch has not already learned how to forward.
27	It shall support unicast MAC filtering to prevent the forwarding of any type of packet with a matching MAC address.
28	Switch shall support for Admission Control features to improve the network's ability to automatically identify, prevent, and respond to security threats and also to enable the switches to collaborate with third-party solutions for security-policy compliance and enforcement before a host is permitted to access the network.

29	It shall be able to discover the neighboring device of the same OEM giving the details about the platform, IP Address, Link connected through etc, thus helping in troubleshooting connectivity problems. It shall support LLDP or LLDP-MED for network discovery
30	There shall be support for Asynchronous data flows upstream and downstream from the end station or on the uplink using ingress policing and egress shaping
31	It shall support Optical Transceiver Digital Diagnostic Monitoring and support 802.3ah link layer remote loopback and discovery
32	It shall support configuration rollback to replace current configuration with any saved configuration file
33	It shall support Auto sensing speed on 10/100/1000 ports, Auto negotiating half/fullduplex on all ports and Auto-MDIX.
34	**Quality of Service (QoS) Features:**
35	The LAN switch shall have per-port broadcast, multicast, and unicast storm control.
36	<table><tr><th>Existing Clause</th><th>Amended clause</th></tr><tr><td>There shall be 12 hardware-based queues per port for flexible QoS management.</td><td>There shall be 8 hardware-based queues per port for flexible QoS management.</td></tr></table>
37	There shall be supports WRR, WRED, SP, and WRR+SP
38	There shall be Shaping and Scheduling – SP, WRR, SPQ + WRR, WFQ, Weighted Deficit Round Robin (WDRR)
39	The switch should support QOS based on Switch port, 802.1p priority queues, vLAN ID, MAC addresses, IPv4/IPv6 addresses, DSCP, ToS, Protocol type, TCP/UDP ports,IPv6 traffic class
40	It should support Time-Based QOS
41	It shall support BPDU filtering feature, to shut down Spanning Tree Protocol Port Fastenabled interfaces when BPDUs are received to avoid accidental topology loops.
42	**Network Security Features:**
43	The LAN switch shall support IEEE 802.1x to allow dynamic, port-based security, providing user authentication, Dynamic VLAN assignment
44	The LAN Switch shall support Compound Authentication and Change of authorization
45	It shall support unicast MAC filtering to prevent the forwarding of any type of packet with a matching MAC address.
46	It shall support unknown unicast and multicast port blocking to allow tight control by filtering packets that the switch has not already learned how to forward
47	It shall support IGMP filtering to provide multicast authentication by filtering out no subscribers and limits the number of concurrent multicast streams available per port
48	It shall support for SSHv2, SSL v2/v3, SNMPv3 to provide network security by encrypting administrator traffic during Telnet, SSH and SNMP sessions.
49	It shall support IMPB, DHCP snooping, IPSG and dyanmic ARP inspection

50	The switch shall be able to work on both IPv4 and IPv6 (dual stack) from day one
51	It shall support Port Mirroring (minimum 4 mirror session) based on port basis and VLAN basis to support intrusion prevention system deployment in different VLANs. It shall support bidirectional data on mirror port which allows IDS to take action when an intruder is detected. It should support RSPAN.
52	It shall support RADIUS authentication to enable centralized control of the switch and restrict unauthorized users from altering the configuration.
53	It shall support MAC address notification to allow administrators to be notified of users added to or removed from the network
54	It shall support port security up to 1K MAC address to secure the access to an access or trunk port based on MAC address. After a specific timeframe, the aging feature should remove the MAC address from the switch to allow another device to connect to the same port.
55	It shall support multilevel security on console access to prevent unauthorized users from altering the switch configuration.
56	It shall support BPDU filtering feature, to shut down Spanning Tree Protocol Port Fast enabled interfaces when BPDUs are received to avoid accidental topology loops.
57	It shall support Spanning-Tree Root Guard (STRG) to prevent edge devices not in the network administrator's control from becoming Spanning Tree Protocol root nodes.
58	**Management:**
59	It shall have Remote Monitoring software agent to support for enhanced traffic management, monitoring, and analysis or FNF (flexible netflow) or any industry standard.
60	It shall have Time-Domain Reflectometer (TDR) or equivalent technology to diagnose and resolve cabling problems on copper ports.
61	It shall support Unidirectional Link Detection (UDLD)
62	It shall have Layer 2 trace route to ease troubleshooting by identifying the physical path that a packet takes from source to destination
63	It shall support Web based or Trivial File Transfer Protocol (TFTP) and File Transfer Protocol (FTP), SCP
64	It shall support Simple Network Time Protocol/Network Timing Protocol (SNTP/NTP) to provide an accurate and consistent time stamp to all intranet switches
65	It shall support RMON v1 and v2 standards and 4 RMON groups
66	It shall support SNMPv1, SNMPv2c, and SNMPv3 and Telnet interface support to deliver comprehensive in-band management, and a CLI-based management console to provide detailed out-of-band management and Web Management for better manageability.
67	It should support routing protocol static and RIP/OSPF.
68	Switch should support Surge Protection on power input
69	Switch should support Surge Protection to ± 4 kV (line-earth) and ± 2 kW (line-line) on power input
70	Loopback Detection (LBD) and Switch should support 802.3ah link layer remote loopback and discovery

71	It should support 63 IP interface, 8 loopback interfaces and Intervlan routing
72	It shall support default routing and static routing Support for 128 static IPv4 routes Support for 64 static IPv6 routes
73	It shall support VRRP v2
74	Should support authentication to allow an IP phone and a PC to authenticate on the same switch port while being placed on the appropriate voice and data VLANs.
75	Should support GVRP VLAN Trunking Protocol
76	It should support Port-based VLAN, MAC-based VLAN, VLAN Trunking, Voice VLAN and Survilance VLAN, Private VLAN, GVRP, GARP,IP-Subnet Based VLAN and ISM VLAN (MVR), Guest VLAN
77	Should have the ability to disable per-VLAN MAC learning
78	Should support MAC Authentication Bypass (MAB) and WebAuth with downloadable ACLs
79	Switch must support Zero Touch Deployment feature so that it can automatically obtain IP address and configuration file from remote server
80	It should support flex link.
81	It should support TWAMP. Should support TWAMP responder and receiver for IPv6
82	It should support Ethernet Ring Protection Switching ERPS v1 and v2 for main ring and sub rings: G.8032 ERPS Ring Protection Switching provides loop avoidance with redundancy in Layer-2 Ethernet networks using concept of RPL (Ring Protection Link). The switch completion time (transfer time) for a failure on a ring link shall be less than 50ms.
83	It should support IEEE 802.1QinQ mechanism and VLAN translation
84	It should support In-Service Software Upgrade (ISSU)
85	It shall support built-in power-on diagnostics and system monitoring capabilities to detect hardware failures.
86	Bandwidth management: Flow-based bandwidth management, ingress rate-limiting; egress rate shaping per port.
87	It shall loopback detection and shut or disable a physical port and VLAN based on detection of loop on that interface
88	To check support for Standard and Extended Access Lists
89	It shall support access list based on IPv4/v6 address Protocol type IPv6 flow label VLAN-ID MAC-ID DSCP IPv6 traffic class TCP/UDP Port and User-defined packet content
90	Switch shall support Time based ACL
91	The Switch should support minimum 1K Ingress Access Control Entries
92	To check IGMP static join feature.
93	It shall support new tools such as Remote Defect Indication, Alarm Report, one-way or two-way Delay Measurement, Packet Loss measurement, and in-service diagnostics tools.
94	To check Login and Access control List violations shall generate alarms to Network Management System and a log of the same shall be generated.

<table>
<tr><td>95</td><td>It should support of ICMPv4, ICMPv6, Telnet v4, Telnet v6, SNMP v4 and SNMP v6</td></tr>
<tr><td>96</td><td>Switch should support PVST+ to have different stp instance for each vlan.</td></tr>
<tr><td>97</td><td>Switch should support CPU monitoring, Memory monitoring and password recovery.</td></tr>
<tr><td>98</td><td>Should have extensive support for IP SLA and best path selection for metrics like delay, latency, jitter, packet loss to assure business-critical IP applications or similar technology.</td></tr>
<tr><td>99</td><td>It should support MAC flapping feature to block a duplicate MAC to learn from uplink and downlink interface</td></tr>
<tr><td>100</td><td>It should support duplicate address inspection</td></tr>
<tr><td>101</td><td>Support multiple privilege level to provide different level of access on console port and telnet sessions</td></tr>
<tr><td>102</td><td>Swith should support traffic segmentation</td></tr>
<tr><td>103</td><td>It should support DOS attack prevention and URPF</td></tr>
<tr><td>104</td><td><table><tr><th>Existing Clause</th><th>Amended clause</th></tr><tr><td>Switch should support sflow or netfow</td><td>Switch should support sflow/netflow or Port mirroring</td></tr></table></td></tr>
<tr><td>105</td><td>Switch should support IPv6 Neighbor Discovery (ND)</td></tr>
<tr><td>106</td><td>It shall support MAC address notification to allow administrators to be notified of users added to or removed from the network.</td></tr>
<tr><td>107</td><td><table><tr><th>Existing Clause</th><th>Amended clause</th></tr><tr><td>It should support DHCP server screening and client filtering, DHCP Client, DHCP Server and DHCP Relay with option 82, 60, 61, 18, 37, 125 and 12.</td><td>It should support DHCP server screening and client filtering, DHCP Client, DHCP Server and DHCP Relay with option 82,66,67.</td></tr></table></td></tr>
<tr><td>108</td><td>It should support IEEE 802.1ag Ethernet OAM: Connectivity Fault Management (Support 32 MEPs)</td></tr>
<tr><td>109</td><td>It should support Ethernet OAM compliant with IEEE 802.3ah/Y.1731</td></tr>
<tr><td>110</td><td>It should support Radius and TACACS + Switch, Local Database</td></tr>
<tr><td>111</td><td>It should support L2 Protocol Tunneling for STP,GVRP and LACP</td></tr>
<tr><td>112</td><td>Should support port and vlan mirroring and jumbo frame 9K.</td></tr>
<tr><td>113</td><td>Switch should support system log, traceroute, PING Size up to 9000 bytes or more.</td></tr>
<tr><td>114</td><td>Switch should have dual image. Switch shouldn't go in monitor in any case mode if power off during firmware upgrade.</td></tr>
<tr><td>115</td><td>Should support Optical Transceiver Digital Diagnostic Monitoring for All SFP ports of 1/10G.</td></tr>
<tr><td>116</td><td>Switch should support following SNMP traps or syslog</td></tr>
<tr><td>117</td><td>i)Interface UP & Down</td></tr>
<tr><td>118</td><td>ii)Optical power SFP threshold alarms</td></tr>
</table>

119	iii)STP Topology Changes and New root bridge
120	iv)LLDP table changes
121	v)Threshold alarms for Temperature.
122	vi)Ethernet OAM SNMP alarms.
123	vii)Dying Gasp Traps or alarms
124	Switch should comply to following Temperature performance parameters :
125	i) Operating Temperature - min -5 to 50 °C
126	ii) Storage Temperature - min -20 to 70 °C
127	**Safety Requirement :-**
128	Switch should have safety compliance of CE, LVD
129	**Electromagnetic Compatibility (EMC) Requirements:-**
130	Switch should have EMC compliance of CE
131	Switch shall conform to EN 55022 Class A/B or CISPR22 Class A/B or CE Class A/B or FCC Class A/B Standards for EMC (Electro Magnetic Compatibility) requirements.
132	Switch shall conform to UL 60950 or IEC 60950 or CSA 60950 or EN 60950 Standards for Safety requirements
133	Switch should be IPv6 logo ready Certified
134	It shall have comprehensive debugging features required for software & hardware fault diagnosis. Switch should support Dying Gasp for quick trouble shooting during power failures or system shut downs.
135	Switch should come with default accessories like Switch 3PIN Power cable, RJ-45 console cable, 2 mounting brackets for 19" rack mounting, Mounting kit, Quick Installation Guide

SOR item 2: Switch Type II

	Specification:
1	The LAN switch shall be standalone / rack mountable with the following ports:
2	20 Nos. 10/100/1000 SFP, 4 Port 1G Base-T/SFP combo port and 4 Nos. SFP+ port.
3	The switch should support RJ-45 console port and industry standard CLI
4	<table><tr><th>Existing Clause</th><th>Amended clause</th></tr><tr><td>The switch should support Reset button to make switch reset to default.</td><td>**The switch should support reset option to make switch reset to default.**</td></tr></table>
5	The switch should support RJ-45 management port
6	Switch should have 02 power supply in 1+1 in redundant mode. It should support both type (-48v DC & 240v AC supply) of power source supply on a Single Power Port. Any power source (-48v DC / 240v AC supply) can be inserted on the power port without any external adapter.
7	**General Specification:**

8	The LAN Switch should support below specs Mi**n 256MB RAM, 16MB flash, 1.5MB buffer.**
9	The LAN switch shall be available with minimum Switching Fabric. 128 Gbps
10	The LAN switch shall have minimum packet forwarding rate at 64-byte packet length 95 Mpps
11	The LAN switch shall support minimum 16K MAC address.
12	The LAN switch shall support 1024 static MAC address entries
13	The LAN switch shall have 1K IGMP and 1K MLD snooping groups.
14	Switch should support Dying Gasp for quick trouble shooting during power failures or system shut downs.
15	**Layer-2 Features:**
16	The LAN switch shall support IEEE 802.1Q VLAN up to 255 Active VLANs and 4094 VLAN ID.
17	It shall support for Automatic Negotiation of link speed and duplex to help minimize the configuration & errors.
18	It shall support centralized VLAN Management. VLANs created on the Core Switches shall be propagated to all the other switches automatically, thus reducing the overhead of creating / modifying / deleting VLANs in all the switches in turn eliminating the configuration errors & troubleshooting. It shall support GVRP / VTP for VLAN pruning and management.
19	It shall support edge port in STP, RSTP, MSTP (16 instances), PVST+ mode, BPDU filtering.
20	It shall support 802.1d, 802.1p, 802.1Q, 802.1s, 802.1w, 802.1x,802.3x, 802.1ab.
21	It shall support spanning-tree root guard and loop guard to prevent other edge switches becoming the root bridge.
22	It shall support IGMP snooping v1, v2 and v3, IGMP Proxy , IGMP Qurier and MLDv1, MLD Qurier.
23	It shall support Link Aggregation Protocol (LACP) as per IEEE 802.3ad and and 8 groups per device/8 ports per group.
24	It shall Support for Detection of Unidirectional links and to disable them to avoid problems such as spanning tree loops and support Unidirectional Link Detection (UDLD) or any other industry equivalent protocol
25	It shall have supports L2/L3/L4 QoS/CoS solutions help ensure that critical network services such as VoIP, ERP, Intranet, and video conferencing are served with proper priority.
26	It shall support unknown unicast and multicast port blocking to allow tight control by filtering packets that the switch has not already learned how to forward.
27	It shall support unicast MAC filtering to prevent the forwarding of any type of packet with a matching MAC address.
28	Switch shall support for Admission Control features to improve the network's ability to automatically identify, prevent, and respond to security threats and also to enable the switches to collaborate with third-party solutions for security-policy compliance and enforcement before a host is permitted to access the network.
29	It shall be able to discover the neighboring device of the same OEM giving the details about the platform, IP Address, Link connected through etc, thus helping

	in troubleshooting connectivity problems. It shall support LLDP or LLDP-MED for network discovery
30	There shall be support for Asynchronous data flows upstream and downstream from the end station or on the uplink using ingress policing and egress shaping
31	It shall support Optical Transceiver Digital Diagnostic Monitoring and support 802.3ah link layer remote loopback and discovery
32	It shall support configuration rollback to replace current configuration with any saved configuration file
33	It shall support Auto sensing speed on 10/100/1000 ports, Auto negotiating half/fullduplex on all ports and Auto-MDIX.
34	**Quality of Service (QoS) Features:**
35	The LAN switch shall have per-port broadcast, multicast, and unicast storm control.
36	<table><tr><th>Existing Clause</th><th>Amended clause</th></tr><tr><td>There shall be 12 hardware-based queues per port for flexible QoS management.</td><td>**There shall be 8 hardware-based queues per port for flexible QoS management.**</td></tr></table>
37	There shall be supports WRR, WRED, SP, and WRR+SP
38	There shall be Shaping and Scheduling – SP, WRR, SPQ + WRR, WFQ, Weighted Deficit Round Robin (WDRR)
39	The switch should support QOS based on Switch port, 802.1p priority queues, vLAN ID, MAC addresses, IPv4/IPv6 addresses, DSCP, ToS, Protocol type, TCP/UDP ports,IPv6 traffic class
40	It should support Time-Based QOS
41	It shall support BPDU filtering feature, to shut down Spanning Tree Protocol Port Fastenabled interfaces when BPDUs are received to avoid accidental topology loops.
42	**Network Security Features:**
43	The LAN switch shall support IEEE 802.1x to allow dynamic, port-based security, providing user authentication, Dynamic VLAN assignment
44	The LAN Switch shall support Compound Authentication and Change of authorization
45	It shall support unicast MAC filtering to prevent the forwarding of any type of packet with a matching MAC address.
46	It shall support unknown unicast and multicast port blocking to allow tight control by filtering packets that the switch has not already learned how to forward
47	It shall support IGMP filtering to provide multicast authentication by filtering out no subscribers and limits the number of concurrent multicast streams available per port
48	It shall support for SSHv2, SSL v2/v3, SNMPv3 to provide network security by encrypting administrator traffic during Telnet, SSH and SNMP sessions.
49	It shall support IMPB, DHCP snooping, IPSG and dyanmic ARP inspection
50	The switch shall be able to work on both IPv4 and IPv6 (dual stack) from day one

51	It shall support Port Mirroring (minimum 4 mirror session) based on port basis and VLAN basis to support intrusion prevention system deployment in different VLANs. It shall support bidirectional data on mirror port which allows IDS to take action when an intruder is detected. It should support RSPAN.
52	It shall support RADIUS authentication to enable centralized control of the switch and restrict unauthorized users from altering the configuration.
53	It shall support MAC address notification to allow administrators to be notified of users added to or removed from the network
54	It shall support port security up to 1K MAC address to secure the access to an access or trunk port based on MAC address. After a specific timeframe, the aging feature should remove the MAC address from the switch to allow another device to connect to the same port.
55	It shall support multilevel security on console access to prevent unauthorized users from altering the switch configuration.
56	It shall support BPDU filtering feature, to shut down Spanning Tree Protocol Port Fast enabled interfaces when BPDUs are received to avoid accidental topology loops.
57	It shall support Spanning-Tree Root Guard (STRG) to prevent edge devices not in the network administrator's control from becoming Spanning Tree Protocol root nodes.
58	**Management:**
59	It shall have Remote Monitoring software agent to support for enhanced traffic management, monitoring, and analysis or FNF (flexible netflow) or any industry standard.
60	It shall have Time-Domain Reflectometer (TDR) or equivalent technology to diagnose and resolve cabling problems on copper ports.
61	It shall support Unidirectional Link Detection (UDLD)
62	It shall have Layer 2 trace route to ease troubleshooting by identifying the physical path that a packet takes from source to destination
63	It shall support Web based or Trivial File Transfer Protocol (TFTP) and File Transfer Protocol (FTP), SCP
64	It shall support Simple Network Time Protocol/Network Timing Protocol (SNTP/NTP) to provide an accurate and consistent time stamp to all intranet switches
65	It shall support RMON v1 and v2 standards and 4 RMON groups
66	It shall support SNMPv1, SNMPv2c, and SNMPv3 and Telnet interface support to deliver comprehensive in-band management, and a CLI-based management console to provide detailed out-of-band management and Web Management for better manageability.
67	

Existing Clause	**Amended clause**
All Gigabit Ethernet ports support IEC 61000-4-5 surge protection (6kV)	**All Gigabit Ethernet ports should support IEC Standard for surge protection (6kV)**

68	<table><tr><th>Existing Clause</th><th>Amended clause</th></tr><tr><td>Switch should support Surge Protection on power input and on Ethernet ports as per EN61000-4-5 standard</td><td>**Switch should support Surge Protection on power input and on Ethernet ports as per EN standard**</td></tr></table>
69	Switch should support Surge Protection to ± 4 kV (line-earth) and ± 2 kW (line-line) on power input
70	Loopback Detection (LBD) and Switch should support 802.3ah link layer remote loopback and discovery
71	It should support 63 IP interface, 8 loopback interfaces and Intervlan routing
72	It shall support default routing and static routing Support for 128 static IPv4 routes Support for 64 static IPv6 routes
73	It shall support VRRP v2
74	Should support authentication to allow an IP phone and a PC to authenticate on the same switch port while being placed on the appropriate voice and data VLANs.
75	Should support GVRP VLAN Trunking Protocol
76	It should support Port-based VLAN, MAC-based VLAN, VLAN Trunking, Voice VLAN and Survilance VLAN, Private VLAN, GVRP, GARP,IP-Subnet Based VLAN and ISM VLAN (MVR), Guest VLAN
77	Should have the ability to disable per-VLAN MAC learning
78	Should support MAC Authentication Bypass (MAB) and WebAuth with downloadable ACLs
79	Switch must support Zero Touch Deployment feature so that it can automatically obtain IP address and configuration file from remote server
80	It should support flex link.
81	It should support TWAMP. Should support TWAMP responder and receiver for IPv6
82	It should support Ethernet Ring Protection Switching ERPS v1 and v2 **for main ring and sub rings**: G.8032 ERPS Ring Protection Switching provides loop avoidance with redundancy in Layer-2 Ethernet networks using concept of RPL (Ring Protection Link). The switch completion time (transfer time) for a failure on a ring link shall be less than 50ms.
83	It should support IEEE 802.1QinQ mechanism and VLAN translation
84	It should support In-Service Software Upgrade (ISSU)
85	It shall support built-in power-on diagnostics and system monitoring capabilities to detect hardware failures.
86	Bandwidth management: Flow-based bandwidth management, ingress rate-limiting; egress rate shaping per port.
87	It shall loopback detection and shut or disable a physical port and VLAN based on detection of loop on that interface
88	To check support for Standard and Extended Access Lists

<table>
<tr><td>89</td><td>It shall support access list based on IPv4/v6 address Protocol type IPv6 flow label VLAN-ID MAC-ID DSCP IPv6 traffic class TCP/UDP Port and User-defined packet content</td></tr>
<tr><td>90</td><td>Switch shall support Time based ACL</td></tr>
<tr><td>91</td><td>The Switch should support minimum 1K Ingress Access Control Entries</td></tr>
<tr><td>92</td><td>To check IGMP static join feature.</td></tr>
<tr><td>93</td><td>It shall support new tools such as Remote Defect Indication, Alarm Report, one-way or two-way Delay Measurement, Packet Loss measurement, and in-service diagnostics tools.</td></tr>
<tr><td>94</td><td>To check Login and Access control List violations shall generate alarms to Network Management System and a log of the same shall be generated.</td></tr>
<tr><td>95</td><td>It should support of ICMPv4, ICMPv6, Telnet v4, Telnet v6, SNMP v4 and SNMP v6</td></tr>
<tr><td>96</td><td>Switch should support PVST+ to have different stp instance for each vlan.</td></tr>
<tr><td>97</td><td>Switch should support CPU monitoring, Memory monitoring and password recovery.</td></tr>
<tr><td>98</td><td>Should have extensive support for IP SLA and best path selection for metrics like delay, latency, jitter, packet loss to assure business-critical IP applications or similar technology.</td></tr>
<tr><td>99</td><td>It should support MAC flapping feature to block a duplicate MAC to learn from uplink and downlink interface</td></tr>
<tr><td>100</td><td>It should support duplicate address inspection</td></tr>
<tr><td>101</td><td>Support multiple privilege level to provide different level of access on console port and telnet sessions</td></tr>
<tr><td>102</td><td>Swith should support traffic segmentation</td></tr>
<tr><td>103</td><td>It should support DOS attack prevention and URPF</td></tr>
<tr><td>104</td><td><table><tr><th>Existing Clause</th><th>Amended clause</th></tr><tr><td>Switch should support sflow or netfow</td><td>Switch should support sflow/netflow or Port mirroring</td></tr></table></td></tr>
<tr><td>105</td><td>Switch should support IPv6 Neighbor Discovery (ND)</td></tr>
<tr><td>106</td><td>It shall support MAC address notification to allow administrators to be notified of users added to or removed from the network.</td></tr>
<tr><td>107</td><td><table><tr><th>Existing Clause</th><th>Amended clause</th></tr><tr><td>It should support DHCP server screening and client filtering, DHCP Client, DHCP Server and DHCP Relay with option 82, 60, 61, 18, 37, 125 and 12.</td><td>It should support DHCP server screening and client filtering, DHCP Client, DHCP Server and DHCP Relay with option 82,66,67.</td></tr></table></td></tr>
<tr><td>108</td><td>It should support IEEE 802.1ag Ethernet OAM: Connectivity Fault Management (Support 32 MEPs)</td></tr>
<tr><td>109</td><td>It should support Ethernet OAM compliant with IEEE 802.3ah/Y.1731</td></tr>
<tr><td>110</td><td>It should support Radius and TACACS + Switch, Local Database</td></tr>
<tr><td>111</td><td>It should support L2 Protocol Tunneling for STP,GVRP and LACP</td></tr>
</table>

112	Should support port and vlan mirroring and jumbo frame 9K.
113	Switch should support system log, traceroute, PING Size up to 9000 bytes or more.
114	**Switch should have dual image. Switch shouldn't go in monitor in any case mode if power off during firmware upgrade.**
115	Should support Optical Transceiver Digital Diagnostic Monitoring for All SFP ports of 1/10G.
116	**Switch should support following SNMP traps or syslog**
117	i)Interface UP & Down
118	ii)Optical power SFP threshold alarms
119	iii)STP Topology Changes and New root bridge
120	iv)LLDP table changes
121	v)Threshold alarms for Temperature.
122	vi)Ethernet OAM SNMP alarms.
123	vii)Dying Gasp Traps or alarms
124	Switch should comply to following Temperature performance parameters :
125	i) Operating Temperature - min -5 to 50 °C
126	ii) Storage Temperature - min -20 to 70 °C
127	**Safety Requirement :-**
128	Switch should have safety compliance of CE, LVD
129	**Electromagnetic Compatibility (EMC) Requirements:-**
130	Switch should have EMC compliance of CE
131	Switch shall conform to EN 55022 Class A/B or CISPR22 Class A/B or CE Class A/B or FCC Class A/B Standards for EMC (Electro Magnetic Compatibility) requirements.
132	Switch shall conform to UL 60950 or IEC 60950 or CSA 60950 or EN 60950 Standards for Safety requirements
133	Switch should be IPv6 logo ready Certified
134	It shall have comprehensive debugging features required for software & hardware fault diagnosis. Switch should support Dying Gasp for quick trouble shooting during power failures or system shut downs.
135	Switch should come with defaut accessories like Switch 3PIN Power cable, RJ-45 console cable, 2 mounting brackets for 19" rack mounting, Mounting kit, Quick Installation Guide

SOR item 3: Switch Type III

	Specification:
1	The LAN switch shall be standalone / rack mountable with the following ports:
2	24 Port 1G Base-T port and 4 Nos. SFP+ port.
3	The switch should support RJ-45 console port and industry standard CLI

4	<table><tr><th>Existing Clause</th><th>Amended clause</th></tr><tr><td>The switch should support Reset button to make switch reset to default.</td><td>The switch should support reset option to make switch reset to default.</td></tr></table>
5	The switch should support RJ-45 management port
6	Switch should have 240v AC supply
7	**General Specification:**
8	The LAN Switch should support below specs Min 256MB RAM, 16MB flash, 1.5MB buffer.
9	The LAN switch shall be available with minimum Switching Fabric. 128 Gbps
10	The LAN switch shall have minimum packet forwarding rate at 64-byte packet length 95 Mpps
11	The LAN switch shall support minimum 16K MAC address.
12	The LAN switch shall support 1024 static MAC address entries
13	The LAN switch shall have 1K IGMP and 1K MLD snooping groups.
14	Switch should support Dying Gasp for quick trouble shooting during power failures or system shut downs.
15	**Layer-2 Features:**
16	The LAN switch shall support IEEE 802.1Q VLAN up to 255 Active VLANs and 4094 VLAN ID.
17	It shall support for Automatic Negotiation of link speed and duplex to help minimize the configuration & errors.
18	It shall support centralized VLAN Management. VLANs created on the Core Switches shall be propagated to all the other switches automatically, thus reducing the overhead of creating / modifying / deleting VLANs in all the switches in turn eliminating the configuration errors & troubleshooting. It shall support GVRP / VTP for VLAN pruning and management.
19	It shall support edge port in STP, RSTP, MSTP (16 instances), PVST+ mode, BPDU filtering.
20	It shall support 802.1d, 802.1p, 802.1Q, 802.1s, 802.1w, 802.1x, 802.3x, 802.1ab.
21	It shall support spanning-tree root guard and loop guard to prevent other edge switches becoming the root bridge.
22	It shall support IGMP snooping v1, v2 and v3, IGMP Proxy , IGMP Qurier and MLDv1, MLD Qurier.
23	It shall support Link Aggregation Protocol (LACP) as per IEEE 802.3ad and and 8 groups per device/8 ports per group.
24	It shall Support for Detection of Unidirectional links and to disable them to avoid problems such as spanning tree loops and support Unidirectional Link Detection (UDLD) or any other industry equivalent protocol
25	It shall have supports L2/L3/L4 QoS/CoS solutions help ensure that critical network services such as VoIP, ERP, Intranet, and video conferencing are served with proper priority.
26	It shall support unknown unicast and multicast port blocking to allow tight control by filtering packets that the switch has not already learned how to forward.

<table>
<tr><td>27</td><td>It shall support unicast MAC filtering to prevent the forwarding of any type of packet with a matching MAC address.</td></tr>
<tr><td>28</td><td>Switch shall support for Admission Control features to improve the network’s ability to automatically identify, prevent, and respond to security threats and also to enable the switches to collaborate with third-party solutions for security-policy compliance and enforcement before a host is permitted to access the network.</td></tr>
<tr><td>29</td><td>It shall be able to discover the neighboring device of the same OEM giving the details about the platform, IP Address, Link connected through etc, thus helping in troubleshooting connectivity problems. It shall support LLDP or LLDP-MED for network discovery</td></tr>
<tr><td>30</td><td>There shall be support for Asynchronous data flows upstream and downstream from the end station or on the uplink using ingress policing and egress shaping</td></tr>
<tr><td>31</td><td>It shall support Optical Transceiver Digital Diagnostic Monitoring and support 802.3ah link layer remote loopback and discovery</td></tr>
<tr><td>32</td><td>It shall support configuration rollback to replace current configuration with any saved configuration file</td></tr>
<tr><td>33</td><td>It shall support Auto sensing speed on 10/100/1000 ports, Auto negotiating half/fullduplex on all ports and Auto-MDIX.</td></tr>
<tr><td>34</td><td>Quality of Service (QoS) Features:</td></tr>
<tr><td>35</td><td>The LAN switch shall have per-port broadcast, multicast, and unicast storm control.</td></tr>
<tr><td>36</td><td><table><tr><th>Existing Clause</th><th>Amended clause</th></tr><tr><td>There shall be 12 hardware-based queues per port for flexible QoS management.</td><td>There shall be 8 hardware-based queues per port for flexible QoS management.</td></tr></table></td></tr>
<tr><td>37</td><td>There shall be supports WRR, WRED, SP, and WRR+SP</td></tr>
<tr><td>38</td><td>There shall be Shaping and Scheduling – SP, WRR, SPQ + WRR, WFQ, Weighted Deficit Round Robin (WDRR)</td></tr>
<tr><td>39</td><td>The switch should support QOS based on Switch port, 802.1p priority queues, vLAN ID, MAC addresses, IPv4/IPv6 addresses, DSCP, ToS, Protocol type, TCP/UDP ports,IPv6 traffic class</td></tr>
<tr><td>40</td><td>It should support Time-Based QOS</td></tr>
<tr><td>41</td><td>It shall support BPDU filtering feature, to shut down Spanning Tree Protocol Port Fastenabled interfaces when BPDUs are received to avoid accidental topology loops.</td></tr>
<tr><td>42</td><td>Network Security Features:</td></tr>
<tr><td>43</td><td>The LAN switch shall support IEEE 802.1x to allow dynamic, port-based security, providing user authentication, Dynamic VLAN assignment</td></tr>
<tr><td>44</td><td>The LAN Switch shall support Compound Authentication and Change of authorization</td></tr>
<tr><td>45</td><td>It shall support unicast MAC filtering to prevent the forwarding of any type of packet with a matching MAC address.</td></tr>
<tr><td>46</td><td>It shall support unknown unicast and multicast port blocking to allow tight control by filtering packets that the switch has not already learned how to forward</td></tr>
</table>

47	It shall support IGMP filtering to provide multicast authentication by filtering out no subscribers and limits the number of concurrent multicast streams available per port
48	It shall support for SSHv2, SSL v2/v3, SNMPv3 to provide network security by encrypting administrator traffic during Telnet, SSH and SNMP sessions.
49	It shall support IMPB, DHCP snooping, IPSG and dyanmic ARP inspection
50	The switch shall be able to work on both IPv4 and IPv6 (dual stack) from day one
51	It shall support Port Mirroring (minimum 4 mirror session) based on port basis and VLAN basis to support intrusion prevention system deployment in different VLANs. It shall support bidirectional data on mirror port which allows IDS to take action when an intruder is detected. It should support RSPAN.
52	It shall support RADIUS authentication to enable centralized control of the switch and restrict unauthorized users from altering the configuration.
53	It shall support MAC address notification to allow administrators to be notified of users added to or removed from the network
54	It shall support port security up to 1K MAC address to secure the access to an access or trunk port based on MAC address. After a specific timeframe, the aging feature should remove the MAC address from the switch to allow another device to connect to the same port.
55	It shall support multilevel security on console access to prevent unauthorized users from altering the switch configuration.
56	It shall support BPDU filtering feature, to shut down Spanning Tree Protocol Port Fast enabled interfaces when BPDUs are received to avoid accidental topology loops.
57	It shall support Spanning-Tree Root Guard (STRG) to prevent edge devices not in the network administrator's control from becoming Spanning Tree Protocol root nodes.
58	**Management:**
59	It shall have Remote Monitoring software agent to support for enhanced traffic management, monitoring, and analysis or FNF (flexible netflow) or any industry standard.
60	It shall have Time-Domain Reflectometer (TDR) or equivalent technology to diagnose and resolve cabling problems on copper ports.
61	It shall support Unidirectional Link Detection (UDLD)
62	It shall have Layer 2 trace route to ease troubleshooting by identifying the physical path that a packet takes from source to destination
63	It shall support Web based or Trivial File Transfer Protocol (TFTP) and File Transfer Protocol (FTP), SCP
64	It shall support Simple Network Time Protocol/Network Timing Protocol (SNTP/NTP) to provide an accurate and consistent time stamp to all intranet switches
65	It shall support RMON v1 and v2 standards and 4 RMON groups
66	It shall support SNMPv1, SNMPv2c, and SNMPv3 and Telnet interface support to deliver comprehensive in-band management, and a CLI-based management console to provide detailed out-of-band management and Web Management for better manageability.

67	**Existing Clause** / **Amended clause** All Gigabit Ethernet ports support IEC 61000-4-5 surge protection (6kV) / **All Gigabit Ethernet ports should support IEC Standard for surge protection (6kV)**
68	**Existing Clause** / **Amended clause** Switch should support Surge Protection on power input and on Ethernet ports as per EN61000-4-5 standard / **Switch should support Surge Protection on power input and on Ethernet ports as per EN standard**
69	Switch should support Surge Protection to ± 4 kV (line-earth) and ± 2 kW (line-line) on power input
70	Loopback Detection (LBD) and Switch should support 802.3ah link layer remote loopback and discovery
71	It should support 63 IP interface, 8 loopback interfaces and Intervlan routing
72	It shall support default routing and static routing Support for 128 static IPv4 routes Support for 64 static IPv6 routes
73	It shall support VRRP v2
74	Should support authentication to allow an IP phone and a PC to authenticate on the same switch port while being placed on the appropriate voice and data VLANs.
75	Should support GVRP VLAN Trunking Protocol
76	It should support Port-based VLAN, MAC-based VLAN, VLAN Trunking, Voice VLAN and Survilance VLAN, Private VLAN, GVRP, GARP,IP-Subnet Based VLAN and ISM VLAN (MVR), Guest VLAN
77	Should have the ability to disable per-VLAN MAC learning
78	Should support MAC Authentication Bypass (MAB) and WebAuth with downloadable ACLs
79	Switch must support Zero Touch Deployment feature so that it can automatically obtain IP address and configuration file from remote server
80	It should support flex link.
81	It should support TWAMP. Should support TWAMP responder and receiver for IPv6
82	It should support Ethernet Ring Protection Switching ERPS v1 and v2 **for main ring and sub rings**: G.8032 ERPS Ring Protection Switching provides loop avoidance with redundancy in Layer-2 Ethernet networks using concept of RPL (Ring Protection Link). The switch completion time (transfer time) for a failure on a ring link shall be less than 50ms.
83	It should support IEEE 802.1QinQ mechanism and VLAN translation
84	It should support In-Service Software Upgrade (ISSU)
85	It shall support built-in power-on diagnostics and system monitoring capabilities to detect hardware failures.
86	Bandwidth management: Flow-based bandwidth management, ingress rate-limiting; egress rate shaping per port.

<table>
<tr><td>87</td><td>It shall loopback detection and shut or disable a physical port and VLAN based on detection of loop on that interface</td></tr>
<tr><td>88</td><td>To check support for Standard and Extended Access Lists</td></tr>
<tr><td>89</td><td>It shall support access list based on IPv4/v6 address Protocol type IPv6 flow label VLAN-ID MAC-ID DSCP IPv6 traffic class TCP/UDP Port and User-defined packet content</td></tr>
<tr><td>90</td><td>Switch shall support Time based ACL</td></tr>
<tr><td>91</td><td>The Switch should support minimum 1K Ingress Access Control Entries</td></tr>
<tr><td>92</td><td>To check IGMP static join feature.</td></tr>
<tr><td>93</td><td>It shall support new tools such as Remote Defect Indication, Alarm Report, one-way or two-way Delay Measurement, Packet Loss measurement, and in-service diagnostics tools.</td></tr>
<tr><td>94</td><td>To check Login and Access control List violations shall generate alarms to Network Management System and a log of the same shall be generated.</td></tr>
<tr><td>95</td><td>It should support of ICMPv4, ICMPv6, Telnet v4, Telnet v6, SNMP v4 and SNMP v6</td></tr>
<tr><td>96</td><td>Switch should support PVST+ to have different stp instance for each vlan.</td></tr>
<tr><td>97</td><td>Switch should support CPU monitoring, Memory monitoring and password recovery.</td></tr>
<tr><td>98</td><td>Should have extensive support for IP SLA and best path selection for metrics like delay, latency, jitter, packet loss to assure business-critical IP applications or similar technology.</td></tr>
<tr><td>99</td><td>It should support MAC flapping feature to block a duplicate MAC to learn from uplink and downlink interface</td></tr>
<tr><td>100</td><td>It should support duplicate address inspection</td></tr>
<tr><td>101</td><td>Support multiple privilege level to provide different level of access on console port and telnet sessions</td></tr>
<tr><td>102</td><td>Swith should support traffic segmentation</td></tr>
<tr><td>103</td><td>It should support DOS attack prevention and URPF</td></tr>
<tr><td>104</td><td><table><tr><th>Existing Clause</th><th>Amended clause</th></tr><tr><td>Switch should support sflow or netfow</td><td>Switch should support sflow/netflow or Port mirroring</td></tr></table></td></tr>
<tr><td>105</td><td>Switch should support IPv6 Neighbor Discovery (ND)</td></tr>
<tr><td>106</td><td>It shall support MAC address notification to allow administrators to be notified of users added to or removed from the network.</td></tr>
<tr><td>107</td><td><table><tr><th>Existing Clause</th><th>Amended clause</th></tr><tr><td>It should support DHCP server screening and client filtering, DHCP Client, DHCP Server and DHCP Relay with option 82, 60, 61, 18, 37, 125 and 12.</td><td>It should support DHCP server screening and client filtering, DHCP Client, DHCP Server and DHCP Relay with option 82,66,67.</td></tr></table></td></tr>
<tr><td>108</td><td>It should support IEEE 802.1ag Ethernet OAM: Connectivity Fault Management (Support 32 MEPs)</td></tr>
</table>

109	It should support Ethernet OAM compliant with IEEE 802.3ah/Y.1731
110	It should support Radius and TACACS + Switch, Local Database
111	It should support L2 Protocol Tunneling for STP,GVRP and LACP
112	Should support port and vlan mirroring and jumbo frame 9K.
113	Switch should support system log, traceroute, PING Size up to 9000 bytes or more.
114	**Switch should have dual image. Switch shouldn't go in monitor in any case mode if power off during firmware upgrade.**
115	Should support Optical Transceiver Digital Diagnostic Monitoring for All SFP ports of 1/10G.
116	**Switch should support following SNMP traps or syslog**
117	i)Interface UP & Down
118	ii)Optical power SFP threshold alarms
119	iii)STP Topology Changes and New root bridge
120	iv)LLDP table changes
121	v)Threshold alarms for Temperature.
122	vi)Ethernet OAM SNMP alarms.
123	vii)Dying Gasp Traps or alarms
124	Switch should comply to following Temperature performance parameters :
125	i) Operating Temperature - min -5 to 50 °C
126	ii) Storage Temperature - min -20 to 70 °C
127	**Safety Requirement :-**
128	Switch should have safety compliance of CE, LVD
129	**Electromagnetic Compatibility (EMC) Requirements:-**
130	Switch should have EMC compliance of CE
131	Switch shall conform to EN 55022 Class A/B or CISPR22 Class A/B or CE Class A/B or FCC Class A/B Standards for EMC (Electro Magnetic Compatibility) requirements.
132	Switch shall conform to UL 60950 or IEC 60950 or CSA 60950 or EN 60950 Standards for Safety requirements
133	Switch should be IPv6 logo ready Certified
134	It shall have comprehensive debugging features required for software & hardware fault diagnosis. Switch should support Dying Gasp for quick trouble shooting during power failures or system shut downs.
135	Switch should come with defaut accessories like Switch 3PIN Power cable, RJ-45 console cable, 2 mounting brackets for 19" rack mounting, Mounting kit, Quick Installation Guide

Note :- In the specification wherever support for a feature has been asked for, it will mean that the feature should be available without RailTel requiring any other hardware/software/licenses. Thus all hardware/software/licenses required for enabling the support/feature shall be included in the offer.

Annexure-II

PROFORMA FOR THE LONG-TERM MAINTENANCE SUPPORT (Not Applicable for this Bid)
(To be signed by the O.E.M.)

RGM/WR **Dated: …….**
RailTel Corporation of India Ltd.
……
……...
……...

Applicable for OEM directly participating in the Bid.

I / We ……. hereby confirm that we have read specifications & conditions of GeM Bid No. ……..and accept that the requirement of Long Term Maintenance Support as per Clause 17 shall be met by us **directly or through our subsidiary in India** as per rates quoted in the Price Bid. I / We shall provide services as per terms and conditions pertaining to Long Term Maintenance Support of tender document.

Or

Applicable for Authorized Distributor/Partner of OEM

I / We ……. hereby confirm that we have read specifications & conditions of GeM Bid No. ……..and accept that the requirement of Long Term Maintenance Support as per Clause 17 shall be met by Authorized Distributor/Partner of OEM. However, if Authorized Distributor/Partner fails to fulfil the support obligation due to any un-foreseen circumstances, the same shall be provided by us **directly or through our subsidiary in India for the mentioned/remaining period at the quoted prices by the bidder. I/We have gone through the requirement mentioned in the Bid Document and shall provide services as per terms and conditions pertaining to Long Term Maintenance Support of Bid document.**

(Signature of Firm's Authorized Officer)

Seal

Signature of witness:

……

……

Note: Please Strike out whichever is not applicable.

Annexure-III

RGM/WR **Dated: …….**
RailTel Corporation of India Ltd.
……
……....
……....

Subject: Manufacturer Authorisation form (MAF) to M/s ……. for ……
Ref: GeM Bid No. GEM/2022/B/2125179 dated: 11.05.2022

Dear Sir,
We, M/s……, are established and reputed manufacturer and service provider of ……..(Product details), having our registered office at ……..
We hereby authorise M/s …….. (bidder name), Office ……. to participate in bid and subsequently upon award of the bid to execute the supply and Installation & Commissioning of our range of products against your above said bid.
We further extend our warranty for …… years for our range of products offered by M/s ……..against the above-said bid.

Thanking you,
Best regards,

Authorised Signatory

****

Annexure-IV

FORMAT FOR AFFIDAVIT TO BE UPLOADED BY TENDERER ALONGWITH THE TENDER DOCUMENTS

(To be executed in presence of Public notary on non-judicial stamp paper of the value of Rs.100/-. The stamp paper has to be in the name of the tenderer) **

I…….. (Name and designation)** appointed as the attorney/authorized signatory of the tenderer (including its constituents), M/s._____ (hereinafter called the tenderer) for the purpose of the Tender documents for the work of _____
as per the tender No._____ of (-------Railway), do hereby solemnly affirm and state on the behalf of the tenderer including its constituents as under:

(i) I/We the tenderer (s) am/are signing this document after carefully reading the contents.

(ii) I/we the tenderer(s) also accept all the conditions of the tender and have signed all the pages in confirmation thereof.

(iii) I/We hereby declare that I/We have downloaded the tender documents from RailTel's website www.railtelindia.com or GeM Portal gem.gov.in. I/We have verified the content of the document from the website and there is no addition, no deletion or no alteration to the content of the tender document. In case of any discrepancy noticed at any stage i.e. evaluation of tenderers, execution of work or final payment of the contract, the master copy available with the railway Administration shall be final and binding upon me/us.

(iv) I/We declare and certify that I/we have not made any misleading or false representation in the forms, statements and attachments in proof of the qualification requirements.

(v) I/We also understand that my/our offer will be evaluated based on the documents/credentials submitted along with the offer and same shall be binding upon me/us.

(vi) I/We declare that the information and documents submitted alongwith the tender by me/us are correct and I/we are fully responsible for the correctness of the information and documents submitted by us.

(vii) I/We undersigned that if the certificates regarding eligibility criteria submitted by us are found to be forged/false or incorrect at any time during process for evaluation of tenders, it shall lead to forfeiture of the tender EMD besides banning of business for five year on entire IR. Further, I/we (*insert name of*

the tenderer) ** _____ and all my/our constituents understand that my/our offer shall be summarily rejected.

(viii) I/we also understand that if the certificates submitted by us are found to be false/forged or incorrect at any time after the award of the contract, it will lead to termination of the contract, along with forfeiture of EMD/SD and Performance Guarantee besides any other action provided in the contract including banning of business for five year on entire IR.

DEPONENT
SEAL AND SIGNATURE
OF THE TENDERER

VERIFICATION
I/We above named tenderer do hereby solemnly affirm and verify that the contents of my/our above affidavit are true and correct. Nothing has been concealed and no part of it is false.

DEPONENT
SEAL AND SIGNATURE
OF THE TENDERER

Place:
Dated:

** The contents in Italics are only for guidance purpose. Details as appropriate are to be filled in suitably by tenderer. Attestation before Magistrate/Notary Public.

Annexure - V

PROFORMA FOR PERFORMANCE BANK GUARANTEE BOND

(On Stamp Paper of Rs One Hundred)

(To be used by approved Scheduled Banks)

1. In consideration of the RailTel Corporation of India Limited, having its registered office at Plate A, 6th Floor, Office Block Tower -2, East Kidwai Nagar, New Delhi-110023 (Herein after called RailTel) having agreed to exempt ……(Hereinafter called "the said Contractor(s)") from the demand, under the terms and conditions of an Purchase Order/LOA No.……dated……made between……and…….. for (hereinafter called " the said Agreement") of security deposit for the due fulfillment by the said Contractor (s) of the terms and conditions contained in the said Agreement, on production of a Bank Guarantee for Rs. ……(Rs …….. only). We …… (indicate the name of the Bank) hereinafter referred to as "the Bank") at the request of ……. ……. Contractor(s) do hereby undertake to pay the RailTel an amount not exceeding Rs. ……. against any loss or damage caused to or suffered or would be caused to or suffered by the RailTel by reason of any breach by the said Contractor(s) of any of the terms or conditions contained in the said Agreement.

2. We , ……. Bank do hereby undertake to pay the amounts due and payable under this Guarantee without any demur, merely on demand from the RailTel stating that the amount is claimed is due by way of loss or damage caused to or would be caused to or suffered by the RailTel by reason of breach by the said Contractor(s) of any of terms or conditions contained in the said Agreement or by reason of the Contractor(s) failure to perform the said Agreement. Any such demand made on the Bank shall be conclusive as regards the amount due and payable by the Bank under this guarantee. However, our liability under this guarantee shall be restricted to an amount not exceeding Rs . ……

3. We, …….. bank undertake to pay to the RailTel any money so demanded notwithstanding any dispute or disputes raised by the Contractor(s) / Bidder(s) in any suit or proceedings pending before any court or Tribunal relating thereto our liability under this present being, absolute and unequivocal. The payment so made by us under this Bond shall be a valid discharge of our liability for payment there under and the Contractor(s) / Bidder(s) shall have no claim against us for making such payment.

4. We,……. Bank further agree that the Guarantee herein contained shall remain in full force and effect during the period that would be taken for the performance of the said Agreement and that it shall continue to be enforceable till all the dues of the RailTel under or by virtue of the said Agreement have been fully paid and its claims satisfied or discharged or till

RailTel certifies that the terms and conditions of the said Agreement have been fully and properly carried out by the said Contractor(s) and accordingly discharges this Guarantee. Unless a demand or claim under the Guarantee is made on us in writing on or before the ……. ……. We shall be discharged from all liability under this Guarantee thereafter.

5. We,…… (indicate the name of Bank) further agree with the RailTel that the RailTel shall have the fullest liberty without our consent and without affecting in any manner our obligations hereunder to vary any of the terms and conditions of the Agreement or to extend time of to postpone for any time or from time to time any of the powers exercisable by the RailTel against the said contractor(s) and to forbear or enforce any of the terms and conditions relating to the said Agreement and we shall not be relieved from our liability by reason of any such variation, or extension to the said Contractor(s) or for any forbearance, act or omission on the part of RailTel or any indulgence by the RailTel to the said Contractor(s) or by any such matter or thing whatsoever which under the law relating to sureties would, but for this provision, have affect of so relieving us.
6. This Guarantee will not be discharged due to the change in the Constitution of the Bank or the Contractor(s) Supplier(s).
7. We, …… (indicate the name of Bank) lastly undertake not to revoke this Guarantee during its currency except with the previous consent of the RailTel in writing.
8. Notwithstanding anything contained herein,
    1. Our liability under the Bank guarantee shall not exceed Rs. …….. (In Rupees)
    2. This Bank Guarantee shall be valid up to ……and
    3. We are liable to pay the guaranteed and or any part thereof under this Bank Guarantee only and only if you serve upon is a written claims or demand or before
    ……. (date of expiry of guarantee).

Dated the day of 2022

for ……..
(indicate the name of the Bank)

Witness

1. Signature
   Name

2. Signature
   Name

****