No.Hafed/MSD/IT/   Dated:

Notice Inviting E-Tender
(E-Tendering Website: **https://etenders.hry.nic.in**)

Online bids are hereby invited for the following work:

Name of Work: **Upgrade/ Replacement of the existing Local Area Network (LAN) with the Latest Technology/ Specifications Including Wi-Fi Connectivity and Firewall Solution installed at Hafed Corporate Office, Sector-5, Panchkula.**

Estimated Cost (in Rs.)	Time Limit	Earnest Money (inRs.)	Tender Document Fee + Processing Fee	Downloading of Tender Document and online bid preparation/ Submission Date & Time	Submission of online bid Date & time
80 Lac	120 days	2.00 Lac	Rs.1000 + Rs. 1000	W.e.f. 10.12.2021 (5.00 PM)	Upto 04.01.2022 (11.00 AM)

The tender document containing details of required work, quantity, specifications etc. And other terms & conditions are available on portal https://etenders.hry.nic.in and on HAFED Website http://hafed.gov.in The date of bid submission is from **10.12.2021 (5.00 PM) to 04.01.2022 (11:00 AM)** through e-Tender portal as mentioned above. All bidders are required to get register on e-tendering portal & obtain Digital Signature from any authorised service provider. The technical bid will be opened on **04.01.2022 (11.30 AM)** and the date for opening of the financial bid will be informed later on.

HAFED reserve the right to reject any/ all tenders without assigning any reason whatsoever.

HARYANA STATE COOPERATIVE SUPPLY AND MARKETING FEDERATION LIMITED

NOTICE INVITING TENDER

1. Electronic Bids are hereby invited by Managing Director, HAFED on behalf of the Government of Haryana from OEMs or their authorized channel partners for the following work/project: -

a.	Tender No	:	Hafed/MSD/IT/2041 dated 10.12.2021
b.	Name of work	:	Upgrade/ Replacement of the existing Local Area Network (LAN) with the Latest Technology/ Specifications Including Wi-Fi Connectivity and Firewall Solution installed at HAFED Corporate Office, Sector-5, Panchkula
c.	Details of Website where Tender Paper is available	:	Tender Document will be available on the e-Tendering portal http://etenders.hry.nic.in and website http://hafed.gov.in w.e.f. 10.12.2021
d.	Tender Fee & Processing Fee (Non Refundable)	:	Rs. 1000/- + Rs. 1000/- to be paid online through e-tendering portal.
e.	Earnest Money Deposit	:	Rs. 2.00 Lac (Rupees Two Lacs Only)
f.	Closing date and time for submission of tender paper	:	Tenders will be received upto **11:00 AM** on **04.01.2022**
g.	Place of opening of tenders	:	Conference Room at Ground Floor, Hafed Corporate Office, Sector-5, Panchkula.
h.	Completion of work	:	Within **120 days** from the date of issue of Supply Order

2. Interested bidders may download the Tender Document from e-Tendering Portal/ website and upload the complete Electronic Tender Papers on e-Tender Portal (https://etenders.hry.nic.in). The firms desirous of applying for undertaking this project should meet the all criteria as per Tender Enquiry.

3. Tender Fee and EMD will be submitting in on-line mode through e-Tendering Portal.

Managing Director
HAFED, Panchkula

HARYANA STATE COOPERATIVE SUPPLY AND MARKETING FEDERATION LIMITED

TENDER DOCUMENT

Hafed/MSD/IT/2041   Dated: Panchkula, the 10.12.2021

1. Electronic Bids are hereby invited by **Managing Director, HAFED** for **Upgrade/ Replacement of the existing Local Area Network (LAN) with the Latest Technology/ Specifications Including Wi-Fi Connectivity and Firewall Solution installed at HAFED Corporate Office, Sector-5, Panchkula** as per terms and conditions mentioned below.

   ## General

2. The Bids should be submitted in accordance with the given below clauses failing which tender may be rejected at the discretion of HAFED. The HAFED also reserve the right to accept any tender in whole or in part, reject any tender or all tenders without assigning any reasons whatsoever or to carry out negotiation with the Bids in the manner considered suitable in the best interest of State. The approved bidder will have to abide by all the terms and conditions of this tender notice and same will remain in force during the period of the contract. The MD, HAFED reserves the right to change the quantity of items under procurement.

   ## Receipt/ Opening of Electronic Bids

3. Electronic Bid will be received upto **11:00AM** on **04.01.2022** at e-tendering portal https://etenders.hry.nic.in. The Bid will be opened by the Committee of Officers of Hafed on the **same date at 11:30AM**. Two bids will be forwarded i.e. "**Technical Bid**" and **"Financial Bid"**. Financial Bid will be opened only of those firms, which comply to all procedural formalities and requirements given in tender paper below besides complying to all technical specifications mentioned at **Appendix B**. Any non-compliance of requirements mentioned in the Technical Bid would render the Bid invalid. The date of opening of Cost Bid will be fixed after evaluation of Tech Bid.

4. **Instructions for uploading Technical and Commercial Bids**:- The following points will be strictly adhered to while filling up the tender enquiry.
   a. **General Instructions:**
      i. Only the forms supplied along with this tender enquiry will be used for submission of both Technical and Commercial bids. Companies will affix their company's stamp in the space provided at the top of each sheet and the authorized signatory of

the company must sign this. Additional sheets, duly authenticated, may be attached if necessary to elucidate specifications or to clarify a point.

ii. Costs indicated in offer for each item should be the landed cost of the item giving break up of basic cost of item, excise duty and all type of taxes specified separately, levies, freight and so on. Details of warranty/ guarantee will also be indicated clearly.

iii. Total cost for the full quantity to be supplied will be indicated.

iv. Only the enclosed formats (**Appendix B to Appendix G**) or their Photostat copies will be used. Companies will affix their company's stamp in the space provided at the bottom of each sheet and authorised signatory of the Company must sign each page. Additional sheet, duly authenticated, may be attached to elucidate specifications or clarify a point.

v. Incomplete tender may be rejected.

vi. Only OEM or their authorised channel partners authorized to quote on behalf of the OEM will respond to this Tender Enquiry.

vii. Bids will be uploaded on specific format enclosed with the tender document.

viii. Full name and status of the person signing the tender documents must be clearly mentioned in the tender.

ix. Enclosures/ Documents to be uploaded should be duly sealed and signed by the authorised signatory of the company/firm.

x. Alterations if any, in the tender documents should be attested properly by the vendor, failing which the tenders are liable to be rejected.

xi. Vendors will not make any assumptions while uploading their bids. If required, clarification will be sought prior to submission of bids.

xii. <u>**Eligibility Criteria**</u>:

   aa The applicant, individual/ company should be a firm registered/incorporated in India.

   ab Must have at least two government orders for IT projects/ Networking projects of minimum value of one crore each.

   ac To be eligible for short listing, the applicants shall provide evidence satisfactory to the HAFED, of their eligibility and of their capability and adequacy of resources to carry out the services.

   ad The Company Should be ISO 9001:2008 certified or higher (Document to be attached)

   ae Tenderers should quote for all items. Tenders not quoting all items will be rejected.

   af Tenderers who do not match all the above-mentioned eligibility criteria will be rejected

b. Technical bid

    i. **OEM Authorization Certificate**. OEM Certificate in respect of the above-mentioned equipment given by the OEM to the vendor stating authority to front end the product/item in the market. Certificate from the OEM will be closed signed by the authorized sign at or explicitly giving reference of the Tender Enquiry against which, it is issued and certifying that the firm concerned (giving Complete address) has been authorized to bid for the product and that maintenance and all other support will be given by the OEM for the duties of the contract/ AMC as per **Appendix F**. Original copy of OEM (Ink signed) may be asked.

    ii. **Brochure and Technical Literature**: - Model Number of the product offered should be clearly mentioned. Only specific product to be quoted, no options of the product to be quoted. Brochure with Technical Literature of offered products to be attached along with the bid to ascertain genuineness and specification of the product. The same will be verified from website of OEM. Any firm submitting fake brochure or not submitting brochure with technical literature will be rejected. Technical Specification of all hardware items is attached at **Appx "B"**.

c. **Commercial Bid**. Commercial Bid Forms given in a standard BOQ format (.xls File) as **Appendix "A"** which has provided with the tender enquiry should only be used to fill up the commercial bid.. Following points should be kept in mind while uploading the commercial bids: -

    i. The Commercial / Cost bid should contain the complete financial aspects quoting cost of items considered essential. Optional items, important spares recommended should be quoted separately. Total net cost must be indicated. Prices as quoted in Commercial bid will be valid for **120 days** from the opening of tender.

    ii. Bidders are requested to note that they should necessarily upload their financial bids in the format provided and no other format is acceptable. Bidders are required to download the BoQ file, open it and complete the coloured (unprotected) Cells with their respective financial quotes and the details (Such as name of the bidder). No other cells should be changed. Once the details have been completed, the bidder should save it and submit it online, without changing the filename. If the BOQ file template is found to be modified by the bidder, the bid will be rejected.

    iii. The authorized signatory of the company must sign the form.

    iv. The vendor must quote for all the items, partial quote will be rejected. The vendor should submit a Technical Compliance

Sheet in the Technical Bid for all the items quoted.

    v. Incomplete quotation is liable to be rejected.

5. **Enclosures/ Documents to be uploaded: -** Technical bids will be uploaded alongwith following documents:

    a. Technical specifications by the vendor-**Appendix B**

    b. Acceptance of terms and conditions by the vendor - **Appendix C**

    c. Certificate to be furnished by the vendor - **Appendix D**

    d. Order copy of government orders for IT projects - **Appendix E**.

    e. OEM Authorization to be furnished for each item by the vendor as per format **Appendix F**

    f. In addition, the following documents will also be submitted along with the technical bid: -

        i. PAN Number and photocopy of PAN Card.

        ii. Certificate of Non-blacklisting/ Non execution of supply orders in Govt Departments in last 5 (five) years duly notarized.

        iii. GST Registration certificate.

        iv. A Power of Attorney (if the tender is not signed by the actual bidder or the tender is submitted on behalf of the firm).

        v. Partnership Deed (as applicable) in case of partnership firm.

        vi. Demo/ presentation of the equipment/ service may be asked and same should be complied by all bidders.

    g. Any other document as required in Eligibility Criteria should be attached.

6. **Selection Procedure**

    a. **Evaluation of Technical Bid**. This Technical Evaluation Committee (TEC) will examine the technical Bid. This would comprise of the following:-

        i. **Paper Evaluation**. The paper evaluation of the technical literature, certificates and compliance statements as per technical Bid and any other information uploaded by the supplier.

    b. **Date and Time of TPC**.   It will be intimated later.

    c. **Evaluation of Commercial Bids**.

        i. The commercial bid submitted by bidders will be evaluated by a Committee of Officers of HAFED constituted by the Managing Director, HAFED for realistic prices. Bidder will be selected based on L1 price. Price evaluation to be done on the total value of project.

        ii. Depending upon the acceptance of the final prices by the Competent Authority, the supply order may be placed on the successful bidders. The bidders will be required to accept the supply order, enter into a contract for supply of items and execution of project as per terms and conditions mentioned in this Tender Enquiry.

d. **Acceptance/ Rejection of Tenders**. HAFED reserve the right to accept or reject any or all tenders without assigning any reason and this department has right to vary the quantity to be procured subject to availability of funds or any other reasons.

7. **Finance Related Clauses.** Tender Fee and EMD will be submitted in on-line mode through e-Tendering Portal.

   a. **Tender Fee & Processing Fee**. Tenders duly completed along with tender fee & Processing Fee of **Rs. 1000/- + Rs. 1000/- online.**

   b. **Earnest Money**
      i. **Amount**. The earnest money of **Rs. 2.00 Lacs** will be submitted online through e-Tendering Portal.
      ii. **Forfeiture of Earnest Money**. The EMD of a tenderer will be forfeited, if the tenderer withdraws or amends its tender or impairs or derogates from the tender in any respect within the period validity of its tender. Further, if the successful tenderer fails to furnish the required performance security within the specific period, its EMD will be forfeited.
      iii. **Release of Earnest Money**. The earnest money of successful tenderer will be refunded on submission of security money. In respect of unsuccessful tenderer, unless otherwise forfeited under clause 7 (b) (iii) above, the earnest money will be refunded on finalization of contract.

   c. **Security Money**
      i. **Amount**. The successful tenderer will have to furnish security money at the rate of 3**%** of the total value of the contract duly pledged in favour of Managing Director, HAFED in any form mentioned in paragraph 7 (b) (i) above. Security money will be refunded on successful completion of warranty period. The successful tenderer will also have to furnish an undertaking to the effect that the tenderer is not black listed by any Government Department.
      ii. **Validity of Security Money**. The security deposit should remain valid for a period of sixty days beyond the date of completion of all contractual obligations of the supplies including warranty obligations. In case of non-adherence to the delivery schedule as given in the Tender for all deliverables of the items/ systems liquidated damages as given in the Tender will be deducted from this amount.
      iii. **Forfeiture of Security Money.** In the event of contractor failing to perform his part of contract to satisfaction of the Department or disregards any terms and conditions of tender notice/work

order, contractor shall be liable to any or all of the fwg action at the discretion of the HAFED:

    aa Forfeiture of Security Money in whole or part

    ab Make good the loss caused to the Government through inability neglect or delay to comply with any demand.

    ac Cancellation of contract without any prior notice

iv. **Release of Security Money: -** The Security money furnished as per paragraph 7 (c) (i) above will be released unless otherwise forfeited to State under paragraph 7 (c) (iii) above after successful expiry of warranty period of subject item.

8. **Liquidated Damages (LD)**

   a. **Applicability and Rate**. If the vendor fails to complete the project within the stipulated period, the vendor will pay to the customer liquidated damages at the rate of point five percent (0.5%) of the total value of the project cost, for every week of delay or part of a week, subject to the maximum value of the liquidated damages being ten **percent (10%)** of the value of supply order. Thereafter, the customer will have right to terminate the supply order and en-cash the bank guarantee given for acceptance of the supply order.

   b. **Token Liquidate Damages**. In case of circumstances beyond the control of the vendor like natural calamity war etc, at the sole discretion of the purchaser, Token Liquidated Damages up to 10% of the normal Liquidated Damages may be imposed by the Competent Financial Authority. The circumstances which allow token LD to be imposed will be decided on case-to-case basis by the competent financial authority and his decision shall be final.

   c. **Method of Payment of LD**. The amount charged as Liquidated Damages shall be deducted by the customer from the amount due for payment to the vendor. If the amount of such LD exceeds the payments due to the vendor, the vendor shall within 30 (thirty) days make payment to the customer in full for final settlement of claims failing which the Bank Guarantee will be en-cashed to make good the amount exceeding the payments due to the vendor.

9. **Delivery and Payment**

   a. **Delivery/ Installation Period**. The delivery/ installation of the stores should be completed within **120** days from date of issue of Supply Order, installation of the system is required to be completed within stipulated time subject to readiness of site (availability of all stores at field location).

   b. **Terms of Payment**

       i. 70% of the total project cost will be paid on receipt and inspection of stores.

        ii. 30% of the total project cost will be paid on installation and satisfactory testing report by the user within a period of 30 days in all respect.

c. **Excise Duty**. All items which excise duty is applicable at varied rate shall be specified discretely, in the commercial bid. Vendor shall be responsible to produce excise duty and other duty/levy certificated in respect of all such items, whether manufactured by the vendor or otherwise.

d. **Lien in Respect of Claim in other Contract**. In case there is any demand against the supplier which cannot be recovered out of his dues or Bank Guarantee bond, the same shall be recoverable out of dues of any other contract he is carrying with any unit/formation under Government of Haryana.

e. **Fall Clause**. If vendor undertakes identical works/supplies identical items in other ministries/ departments at the rates lower than the rates approved by the department, he will have to charge at those rates from this organization

f. **Option Clause**. Number of items/ equipment may fluctuate on plus as well as minus side up to 10% of the ordered quantity during initial order only.

10. **Warranty and Maintenance of equipment Supplied**.

a. **Warranty**. Vendor undertakes to provide one year on site comprehensive warranty. During warranty, the vendor will replace without any cost any accessories, which become defective. During the warranty period all warranty benefits received by vendors from the OEMs, for any equipment pertaining to third parties will be passed on to the customer. In case the vendor fails to ensure rectification of faults, penalties as given in paragraph 8 (a) will be deducted from the Bank guarantee. Items of consumable nature that may not be replaced free on account of defect/ malfunction must be specified clearly in the offer. Failure to provide this information shall be treated as all items components consumables are covered under warranty.

b. **System maintenance beyond warranty period:**- In order to ensure functionality of equipment during their lifetime vendor shall provide undertaking to accept AMC beyond warranty period and provide spares/ component backup support for the entire period on payment basis. Vendor should also enter into the annual maintenance contract for the equipment at the mutually agreed rates if so desired by the user.

11. **Contract execution**

a. **Sub-letting of Contract.** The contractor shall not sublet, transfer or assign the contract or any part thereof without the written permission of the purchaser.

b. **Withdrawal of Offer**. The vendor after opening of commercial bids shall render the vendor unreliable and out rightly debar him from attending any further transaction/negotiations without giving any reasons thereof. Proceeding shall also be initiated by customer to black list the vendor on this account

c. **Rights and Liabilities**. The contractor shall not sell transfer or assign or otherwise dispose of the rights, liabilities without permission of this office.

d. **Fore Closure**. Assam Rifles reserve the right to fore close the Supply Order after giving a notice of a period of one month in case the tenderer is unable to supply the stores.

e. **Compensation**. The successful tenderer will be intimated by a letter of acceptance of his/her/their tender by the HAFED. Till then no tenderer has any right to assume that his/her/their tender has been accepted and if any tenderer disregards this warning and makes any arrangements or incurs any expenditure in anticipation of issue of letter of acceptance, he/she/they will have no claim whatsoever for any compensation at a later stage.

f. **Repeat Clause**. The buyer can order up to 50% additional quantity of the items under present contract within one month from the date of successful completion of this contract subject to the limit of closing of financial year, cost terms and conditions remaining the same. Request or confirm acceptance of this clause will be entirely the discretion of buyer to place repeat order or not.

12. **Arbitration**. In the event of any dispute or difference arising under these conditions or any special conditions of contract, or in connection with the contract (except as to any matters the decision of which is specifically provided for by these of the special conditions), The same shall be referred to Managing Director, HAFED who may appoint an officer of the department as sole arbitrator or some other person. The arbitrator shall be final and binding on the parties to this contract.

13. **Additional Information/ Clarification**. Any other information required by the intending tenderer may be obtained from IT Branch of HAFED on any working day.

Note: - Not withstanding any of the clauses listed in the tender enquiry. HAFED reserve the right to cancel the tender enquiry at any stage without assigning any reason and without any liabilities to the same.

**Bill of Quantity
(BOQ)**

Bill of Quantity (BOQ) for Establishment of Local Area Network in HAFED:

S. No.	Item Description	Qty	A/U
1	Access Switch 24 port PoE	3	Nos
2	Access Switch 48 port PoE	3	Nos
3	Core Switch	2	Nos
4	Wireless LAN controller	1	Nos
5	Wi-Fi Access Points	74	Nos
6	10G SFP Module	16	Nos
7	Firewall	1	Nos
8	9U rack	2	Nos
9	42U rack	1	Nos
10	LAN Ports/ Points	220	Nos
11	LAN cabling with Conduit, CAT 6 cable, I/O Boxes and Optical patch cords	2500	Per meter
12	Penta Scanning & Certification for 25 years	1	No
13	Installation cost	1	Lumpsum

Technical Specifications

Scope of Work:

1. Installation Commissioning including laying of all passive components of LAN including I/O Boxes, Patch Cord, CAT 6 Cable, Pigtail, Fiber Patch Cords, Racks and other components mentioned in RFP for LAN Point installation in all the Six Floors of Hafed Corporate Office Sector-5, Panchkula.

2. Successful Bidder shall maintain sufficient inventory of the spares / critical items for ensuring network availability and resolving the fault within stipulated time period.

1. Access Switch – 24 Port

S. No.	General Specifications	Compliance (Y/N)	Deviation (If any)
	Make:		
	Model:		
1.1	**General Features:**		
1.1.1	Switch should be 1U and rack mountable in standard 19" rack.		
1.1.2	Switch should support internal field replaceable unit redundant power supply		
1.1.3	Switch should have minimum 2 GB RAM and 2 GB Flash.		
1.1.4	Switch should have dedicated slot for modular stacking, in addition to asked uplink ports. Should support for minimum 48 Gbps of stacking throughput supporting 8 switches in single stack.		
1.2	**Performance:**		
1.2.1	Switch shall have minimum 128 Gbps of switching fabric and 95 Mpps of forwarding rate.		
1.2.2	Switch shall have minimum 16K MAC Addresses and 250 active VLAN.		
1.2.3	Should support minimum 11K IPv4 routes or more		
1.2.4	Switch shall have 1K or more multicast routes.		
1.2.5	Switch should support atleast 16K flow entries		
1.2.6	Switch should support 128 or more STP Instances.		
1.2.7	Switch should have 6MB or more packet buffer.		
1.3	**Functionality:**		
1.3.1	Switch should support IEEE Standards of Ethernet: IEEE 802.1D, 802.1s, 802.1w, 802.1x, 802.3ad, 802.3x, 802.1p, 802.1Q, 802.3, 802.3u, 802.3ab, 802.3z.		

1.3.2	Switch must have functionality like static routing, RIP, PIM, OSPF, VRRP, PBR and QoS features from day 1		
1.3.3	Switch should support network segmentation that overcomes the limitation of VLANs using VXLAN and VRFs.		
1.3.4	Switch shall have 802.1p class of service, marking, classification, policing and shaping and eight egress queues.		
1.3.5	Switch should support management features like SSHv2, SNMPv2c, SNMPv3, NTP, RADIUS and TACACS+.		
1.3.6	Switch should support IPv6 Binding Integrity Guard, IPv6 Snooping, IPv6 RA Guard, IPv6 DHCP Guard, IPv6 neighbour Discovery Inspection and IPv6 Source Guard.		
1.3.7	Switch should support 802.1x authentication and accounting, IPv4 and IPv6 ACLs and Dynamic VLAN assignment and MACSec-128 on hardware for all ports.		
1.3.8	Switch must have the capabilities to enable automatic configuration of switch ports as devices connect to the switch for the device type.		
1.3.9	During system boots, the system's software signatures should be checked for integrity. System should capable to understand that system OS are authentic and unmodified, it should have cryptographically signed images to provide assurance that the firmware & BIOS are authentic.		
1.4	**Interfaces**		
1.4.1	Switch shall have 24 nos. 10/100/1000 Base-T ports and additional 4 nos. of 10G SFP+ uplink ports		
1.4.2	All 24 port should support PoE (802.3af) and PoE+ (802.3at) with a PoE power budget of 370 W		
1.5	**Certification:**		
1.5.1	Switch shall conform to UL 60950 or IEC 60950 or CSA 60950 or EN 60950 Standards for Safety requirements of Information Technology Equipment.		
1.5.2	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.		
1.5.3	Switch / Switch's Operating System should be tested for EAL 2/NDPP or above under Common Criteria Certification.		

S. No.	General Specifications	Compliance (Y/N)	Deviation (If any)
1.5.4	OEM should be listed in Gartner Leader Quadrant for Wired and Wireless LAN Infrastructure from last 3 years before releasing this RFP.		

2. Access Switch – 48 Port

S. No.	General Specifications	Compliance (Y/N)	Deviation (If any)
	Make:		
	Model:		
1.1	**General Features:**		
1.1.1	Switch should be 1U and rack mountable in standard 19" rack.		
1.1.2	Switch should support internal field replaceable unit redundant power supply		
1.1.3	Switch should have minimum 2 GB RAM and 2 GB Flash.		
1.1.4	Switch should have dedicated slot for modular stacking, in addition to asked uplink ports. Should support for minimum 48 Gbps of stacking throughput with 8 switches in single stack.		
1.2	**Performance:**		
1.2.1	Switch shall have minimum 176 Gbps of switching fabric and 130 Mpps of forwarding rate.		
1.2.2	Switch shall have minimum 16K MAC Addresses and 250 active VLAN.		
1.2.3	Should support minimum 11K IPv4 routes or more		
1.2.4	Switch shall have 1K or more multicast routes.		
1.2.5	Switch should support at least 16K flow entries		
1.2.6	Switch should support 128 or more STP Instances.		
1.2.7	Switch should have 6MB or more packet buffer.		
1.3	**Functionality:**		
1.3.1	Switch should support IEEE Standards of Ethernet: IEEE 802.1D, 802.1s, 802.1w, 802.1x, 802.3ad, 802.3x, 802.1p, 802.1Q, 802.3, 802.3u, 802.3ab, 802.3z.		
1.3.2	Switch must have functionality like static routing, RIP, REP PIM, OSPF, VRRP, PBR and QoS features from day 1.		
1.3.3	Switch should support network segmentation that overcomes the limitation of VLANs using VXLAN and VRFs.		
1.3.4	Switch shall have 802.1p class of service, marking, classification, policing and shaping		

	and eight egress queues.		
1.3.5	Switch should support management features like SSHv2, SNMPv2c, SNMPv3, NTP, RADIUS and TACACS+ .		
1.3.6	Switch should support IPv6 Binding Integrity Guard, IPv6 Snooping, IPv6 RA Guard, IPv6 DHCP Guard, IPv6 Neighbour Discovery Inspection and IPv6 Source Guard.		
1.3.7	Switch should support 802.1x authentication and accounting, IPv4 and IPv6 ACLs and Dynamic VLAN assignment and MACSec-128 on hardware for all ports.		
1.3.8	Switch must have the capabilities to enable automatic configuration of switch ports as devices connect to the switch for the device type.		
1.3.9	During system boots, the system's software signatures should be checked for integrity. System should capable to understand that system OS are authentic and unmodified, it should have cryptographically signed images to provide assurance that the firmware & BIOS are authentic.		
1.4	**Interface**		
1.4.1	Switch shall have 48 nos. 10/100/1000 Base-T ports and additional 4 nos. of 10G SFP+ uplinks ports.		
1.4.2	All 48 port should support PoE (802.3af) and PoE+ (802.3at) with a PoE power budget of 740 W		
1.5	**Certification:**		
1.5.1	Switch shall conform to UL 60950 or IEC 60950 or CSA 60950 or EN 60950 Standards for Safety requirements of Information Technology Equipment.		
1.5.2	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.		
1.5.3	Switch / Switch's Operating System should be tested for EAL 2/NDPP or above under Common Criteria Certification.		
1.5.4	OEM should be listed in Gartner Leader Quadrant for Wired and Wireless LAN Infrastructure from last 3 years before releasing this RFP.		

3. Core Switch

S. No.	General Specifications	Compliance (Y/N)	Deviation (If any)
	Make:		
	Model:		
1.1	**General Features:**		
1.1.1	Switch shall be 1U to 3U and rack mountable in standard 19" rack.		
1.1.2	Switch shall have 16 GB RAM and 16 GB Flash		
1.1.3	Switch should support optional SSD to host 3rd party container-based application.		
1.1.4	Switch shall have hot swappable 1:1 redundant internal power supply and redundant fan.		
1.1.5	Switch must have dedicated port, in addition to asked uplink ports. Should support for minimum 400 Gbps of stacking throughput with stack cable of 1 meter from day 1		
1.1.6	Shall support In Service Software Upgrade (ISSU) to provide an upgrade of the entire platform or an individual task/process without impacting hardware forwarding. ISSU supports upgrades, downgrades, and rollbacks.		
1.2	**Performance:**		
1.2.1	Switching system shall have minimum 1 Tbps of switching fabric and minimum 744 Mpps of forwarding rate.		
1.2.2	Switching system shall have minimum 32K MAC Addresses and 512 VLANs.		
1.2.3	Switch should support minimum 4K ACLs, 8K Multicast and 30K IPv4, 15K IPv6 Routes..		
1.2.4	Switch shall support application visibility and traffic monitoring with minimum 60 K sflow/jflow/netFlow entries.		
1.2.5	Packet buffer: 16 MB		
1.3	**Functionality:**		
1.3.1	Should support IEEE Standards of Ethernet: IEEE 802.1D, 802.1s, 802.1w, 802.1x, 802.3ad, 802.1ae (256-bit and 128-bit AES), 802.3x, 802.1p, 802.1Q, 1588v2		
1.3.2	Should support AES-256 support with MACSEC-256 encryption algorithm on hardware		
1.3.3	Support BGP, MPLS, IS-IS, VRF, VXLAN, NAT, OSPF Routed Access, Policy-Based Routing (PBR), PIM SM, and Virtual Router Redundancy Protocol (VRRP) from day 1		
1.3.4	Shall have 802.1p class of service, marking, classification, policing and shaping. Should support strict priority queuing.		

1.3.5	Switch should support management features like SSHv2, SNMPv2c, SNMPv3, IGMP, Netconf/ YANG.		
1.3.6	Switch should support port security, DHCP snooping, Spanning tree root guard, First Hop Security.		
1.3.7	IPv6 support in hardware, providing wire rate forwarding for IPv6 network		
1.3.8	Should support 802.1x authentication and accounting, IPv4 and IPv6 ACLs and Dynamic VLAN assignment.		
1.3.9	Eight egress queues per port for different types.		
1.3.10	During system boots, the system's software signatures should be checked for integrity. System should capable to understand that system OS are authentic and unmodified, it should have cryptographically signed images to provide assurance that the firmware & BIOS are authentic.		
1.4	**Interface**		
1.4.1	12 x 1/10/25G SFP28 Interfaces from day 1 and switch should have the provision to expand to 1/10/40 Gig fiber interfaces via a network module if required in the future.		
1.5	**Certification:**		
1.5.1	Switch shall conform to UL 60950, IEC 60950, CSA 60950, EN 60950 Standards		
1.5.2	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.		
1.5.3	OEM should be listed in Gartner Leader Quadrant for Wired and Wireless LAN Infrastructure from last 3 years before releasing this RFP.		
1.5.4	The offered product series should be IPv6 logo certified from day 1		

4. Wireless Controller

S. No.	Category	Specifications	Compliance (Y/N)	Deviation (If any)
	Make			
	Model			
1		Wireless controller should support 250 AP and 5000 clients from day 1 and can be upgraded to 500 AP support with 10000 clients without any hardware change.		
2	Hardware	The controlled shall support deployment flexibility without compromising any features		
		The controller shall support min 5 Gbps tunnelling capacity and shall be upgradable to 10 gbps.		
		The controller shall support 2x 10G/ Multigigabit fiber uplinks		
		Wireless Controller shall support link aggregation and load sharing between Access Point to WLC links		
		The controller shall support hardware encrypted data plane between Access Point and Controller		
		The controller shall be proposed with complete feature set including licensed feature		
3	High Availability	High Availability mode shall support controller inline data plane mode as well as local switching mode and Mesh mode		
		High Availability mode shall allow geographically dispersed installation between Controllers		
		The controller failover shall not trigger client de-authentication and re-association		
		The controller shall support hot WLC software patching for fixing bugs		
		The controller shall support hot AP software patching for fixing bugs		
		The controller shall support new AP hardware without need for		

		upgrading entire controller software.		
		The controller shall support rolling AP upgrade		
		The controller shall support rolling AP upgrade without need for clustering		
		The redundant Controller shall sync Access Point and Client Status, including DHCP IP lease status		
4	Software	Access Point shall be able to proactively distributes Client connection before and after association		
		and tracking client condition in real time using data packet RSSI		
		The controller shall support standard-based, secure AP-Controller data control protocol like CAPWAP. protocol that has known vulnerability like PAPI cannot be used.		
		The controller shall support Inter-Controller Wireless Roaming		
		The controller shall maintain per-user Application usage and shall be able to export it for network analytic.		
		The controller shall support Multi Languages options from embedded GUI Management		
		The controller shall provide per-Client Connection Scoring and provide reasoning of Client Connection Score		
		The controller shall support Cellular offload using IPv6 tunnelling to Mobile Core network		
5	RF management	The controller shall be able to support multiple RF Management profile per group of APs, including Transmit Power Control		
		and Dynamic Channel Assignment on both 2.4GHz and 5Ghz		

		The controller shall be able to identify and avoid interferers with network performance impact analysis report		
		The controller shall support optimized, automatic channel width (20~160Mhz) selection over 5GHz, 802.11ac		
6	Mesh	Mesh AP nodes shall provide quick convergence and fast failover to new root mesh node		
		Mesh Backhaul interface shall support full duplex operation using wired daisy chaining		
		Mesh AP shall support fast roaming for Wired-client through wired-to-wireless bridge client		
7	Application Recognition and Control	The controller shall support per-user and per-WLAN based application recognition and control that throttle usage by rate-limiting		
		The controller application recognition technology shall support exporting to 3rd party compatible format, such as NetFlow v9		
		The controller shall provide policy-based mDNS gateway including Chromecast gateway		
		The controller shall support new application signatures without upgrading controller software		
8	BYOD & Security	The controller shall provide Device Profiling using multiple profiling methods to reduce false-detection		
		The system shall provide secure onboarding service for both employee and guest based on standard-based security protocol		
		Proposed system shall not use public cloud as user data repository		
		The controller shall be able to embedded custom web portal page (HTML) to fully customize user experience without additional cost or extra box		

		The controller shall provide rule-based rogue classification and automatically run rogue mitigation action		
		The controller shall be able to detect employee device connection to Rogue Access Point and contain it automatically. It should also support protection from Honeypot or Evil twin.		
		The controller shall support Content Security using DNS integration, Web Classification shall be fully customizable		
		The system shall support control plane encryption on both IPv4 and IPv6		
		The Controller's image upgrade shall be done through secure, encrypted transport		
		The controller shall be able to provide unique pre-shared keys to the devices that do not support the 802.1x security protocol		
		The controller shall support Identity PSK for on boarding		
		The controller shall support identification & mitigation of threads inside encrypted traffic		
9	Network	The controller shall support mapping of specific VLANs to single SSID, depending on Access Point location and user		
10	Configuration	The controller shall support automatic VLAN assignment per SSID to load-balance user connection.		
		assigned VLAN pool shall be same as number of available VLAN in the system		
		The controller shall support embedded best practice configuration profile and setup		
		The controller shall support packet fragmentation between Access Point and controller communication		

5. Wi-Fi Access Points

S. No.	Specifications	Compliance (Y/N)	Deviation (If any)
	Make:		
	Model		
1	Access Point shall support 2x2 MIMO on both radio interfaces		
2	Access Point shall be able to powered up using PoE (.af)		
3	Access Point shall support assurance, packet capture, RF sensing capabilities		
4	Access Point shall support application visibility and control		
5	Access Point shall support encrypted traffic visibility		
6	Access Point should have Bluetooth5 radio to support use cases of location, asset tracking and analytics.		
7	Access Point shall ship with metal-based mounting bracket for durability and reliability		
8	Access Point shall support Console port that uses Standard Port (RJ-45) type connection		
9	Access Point should have 1x 10/100/1000 Base-T uplink port.		
10	Must have at least 4 dBi Antenna gain on each radio		
11	Must Support data rate up to 1.4 Gbps		
12	Must support minimum of 20 dbm of transmit power in both 2.4Ghz and 5Ghz radios. And should follow the local regulatory norms.		
13	Must support AP enforced load-balance between 2.4Ghz and 5Ghz band.		
14	Must incorporate radio resource management for power, channel and performance optimization		
15	Must have -97 dB or better Receiver Sensitivity.		
16	Must support Proactive Key Caching and/or other methods for Fast Secure Roaming.		
17	Must support Management Frame Protection.		
18	Should support locally-significant certificates on the APs using a Public Key Infrastructure (PKI).		
19	Must support the ability to serve clients and monitor the RF environment concurrently.		
20	Same model AP that serves clients must be able to be dedicated to monitoring the RF environment.		
21	Must be plenum-rated (UL2043).		
22	Must support 16 WLANs per AP for SSID		

S. No.	Specifications	Compliance (Y/N)	Deviation (If any)
	deployment flexibility.		
23	Access Point Must continue serving clients when link to controller is down. It should also have option to authenticate user through Radius server directly from Access Point during link unavailability to controller.		
24	Must support telnet and/or SSH login to APs directly for troubleshooting flexibility.		
25	802.11e and WMM		
26	Must support QoS and Video Call Admission Control capabilities.		

6. 10G SFP Module

S. No.	Specifications	Compliance (Y/N)	Deviation (If any)
	Make:		
	Model:		
1	The SFP should support DOM for diagnosis		
2	Should support upto 400 m link length		
3	Should support 10 Gbps multi-mode fiber		
4	Should support 850 nm wavelength		
5	Should support minimum transmit power of -7.3 dBm		
6	Should have 1 W power consumption		
7	Should support upto 70°C temperature		

7. Next Generation Firewall

S. No.	Specifications	Compliance (Y/N)	Deviation (If any)
1	The Proposed Firewall Vendor should be in the Leaders' Quadrant of the latest Gartner Magic Quadrant for Network Firewalls report must be attached		
2	Firewall appliance should be supplied with at least 14x GE RJ45, 4x GE SFP interfaces		
3	Firewall Throughput should be at least 20 Gbps		
4	Firewall should have IPSec throughput of 6 Gbps		
5	Firewall should have IPS throughput of 2 Gbps		
6	Firewall should support 130000 new sessions per second		
7	Firewall should support 2 Million concurrent sessions		

8	Firewall should support 200 site-to-site VPN tunnels & 2000 Client to Site VPN tunnels		
9	The Firewall solution should support NAT64, DNS64 & DHCPv6		
10	The proposed system shall be able to operate on either Transparent (bridge) mode to minimize interruption to existing network infrastructure or NAT/Route mode. Both modes can also be available concurrently using Virtual Contexts. Minimum 10 Virtual Firewall licenses to be provided with the solution		
11	The physical interface shall be capable of link aggregation, otherwise known as the IEEE 802.3ad standard, allows the grouping of interfaces into a larger bandwidth 'trunk'. It also allows for high availability (HA) by automatically redirecting traffic from a failed link in a trunk to the remaining links in that trunk.		
12	The proposed system should have integrated Traffic Shaping functionality.		
13	The Firewall should have integrated SSL VPN solution to cater to 500 SSL VPN concurrent users.		
14	The Firewall and VPN module shall belong to product family which minimally attain Internet Computer Security Association (ICSA) Certification or equivalent.		
15	The proposed system should support a) IPSEC VPN b) SSL VPN		
16	The device support inbuilt hardware VPN acceleration		
17	The IPS capability shall minimally attain NSS Certification		
18	The Next Generation Firewall (FW + AVC + IPS) throughput should be at least 1.5 Gbps for Mix / production traffic		
19	The IPS detection methodologies shall consist of: a) Signature based detection using real time updated database b) Anomaly based detection that is based on thresholds		
20	The IPS system shall have at least 8,000 signatures		
21	In event if IPS should cease to function, it will fail open by default and is configurable. This means that crucial network traffic will not be blocked and the Firewall will continue to		

	operate while the problem is resolved		
22	IPS solution should have capability to protect against Denial of Service (DOS) and DDOS attacks. Should have flexibility to configure threshold values for each of the Anomaly. DOS and DDOS protection should be applied and attacks stopped before firewall policy look-ups.		
23	IPS signatures should have a configurable actions like terminate a TCP session by issuing TCP Reset packets to each end of the connection, or silently drop traffic in addition to sending a alert and logging the incident		
24	Signatures should a severity level defined to it so that it helps the administrator to understand and decide which signatures to enable for what traffic (e.g. for severity level: high medium low)		
25	The threat prevention (FW + AVC + IPS + Antivirus /Antimalware) throughput should be at least 1 Gbps on Mix / Production traffic		
26	The proposed system should be able to block, allow or monitor only using AV signatures and file blocking based on per firewall policy based or based on firewall authenticated user groups with configurable selection of the following services: HTTP, HTTPS, SMTP, SMTPs, POP3, POP3s, IMAP, FTP etc		
27	The Firewall should support CDR functionality to strip suspected active content from files and deliver a sanitised file in realtime by removing the malicious content from the files received.		
28	The proposed system should be able to block or allow oversize file based on configurable thresholds for each protocol types and per firewall policy.		
29	The proposed system should have integrated Web Content Filtering solution without external solution, devices or hardware modules.		
30	The proposed solution should be able to enable or disable Web Filtering per firewall policy or based on firewall authenticated user groups for both HTTP and HTTPS traffic.		
31	The proposed system shall provide web content filtering features: a) which blocks web plug-ins such as ActiveX, Java Applet, and Cookies. b) Shall include Web URL block c) Shall include score based web keyword block d) Shall include Web Exempt List		

S. No.	SPECIFICATIONS		Compliance (Y/N)	Deviation (If any)
32	The proposed system shall be able to queries a real time database of over 110 million + rated websites categorized into 70+ unique content categories.			
33	The proposed system shall have the ability to detect, log and take action against network traffic based on over 3500 application signatures			
34	The application signatures shall be manual or automatically updated			
35	The administrator shall be able to define application control list based on selectable application group and/or list and its corresponding actions			
36	The proposed system shall allow administrator to prevent sensitive data from leaving the network. Administrator shall be able to define sensitive data patterns, and data matching these patterns that will be blocked and/or logged when passing through the unit.			
37	The proposed system shall have built-in high availability (HA) features without extra cost/license or hardware component			
38	The device shall support stateful session maintenance in the event of a fail-over to a standby unit.			
39	High Availability Configurations should support Active/Active or Active/ Passive			
40	Firewall, VPN (Ipsec), SSL VPN, IPS, Application Control, URL filtering, Anti-Bot, ATP, Gateway Antivirus etc, Antispam , Sandboxing, 24*7 Support, RMA & Advance hardware Replacement should be quoted with the solution for 1 year			

8. 9U Rack

S. No.	SPECIFICATIONS		Compliance (Y/N)	Deviation (If any)
	Make:			
	Model:			
1	**Enclosure Type**	Wall Mount		
2	**General Characteristics**	• The 19"wall mount cabinet are intended for digital infrastructure • The wall mount cabinets made up of steel frame structure		

		• The 19" Wall mount cabinet comes in colours • The 19" Wall Mount cabinet cabinet can be equipped with rear cover for better sealing of the cabinets. • Equipment and accessories for the thermal and cable management such as cable manage, cantilever tray, cooling fan, power distribution unit		
3	**Technical Characteristics Design**	• Top cover made up of CRCA sheet + powder coated • Bottom cover made up of CRCA sheet + powder coated • Side Panels made up of CRCA sheet + powder coated • Frame made up of CRCA sheet + powder coated • Recess angel made up of CRCA sheet + powder coated • Door trims made up of CRCA sheet + powder coated		
4	**Corrosion Resistance**	• Salt spray test according to ISO 9227 (NSS test) and IEC EN 60068-2-11 (Ka test)for 168 hours: degree of rusting Ri1 according to ISO 4628-3, propagation ≤ mm according to ISO 4628-8		
5	**Construction**	19" Rack: Steel frame structure design, metal top cover with 2 fan provision and cable entry provision covered with edge protected rubber grommet, bottom cover with cable entry provision covered with edge protected rubber grommet provide, powder coated finish texure matt - 60 to 80 uM		
6	**Front Door**	Front glass single door with cam lock & key		
7	**Panel**	Front panel mounting hardware		
8	**Cantilever**	Cantilever Tray 255 mm D		
9	**Fan**	230C A/C 90 CFM fan mounted on top cover - Optional		

S. No.		SPECIFICATIONS	Compliance (Y/N)	Deviation (If any)
10	**Cable Manager**	Horizontal cable Manager 1U with PVC loops		
11	**Weight Capacity**	Weight carrying capacity (Certified - 60 Kg)		
12	**Material**	Racks to be preferably made out high quality Tata Steelium CRCA sheets - 0.8/1.5 mm CRCA Sheets.		
13	**Packaging**	5 Ply Carton packaging with edge protectors		
14	**9U Dimensions**	600W x 500D		

9. 42U Rack

S. No.		SPECIFICATIONS	Compliance (Y/N)	Deviation (If any)
	Make:			
	Model:			
1	**Enclosure Type**	Trynox Floor Stand		
2	**Construction**	Standard Rack configuration would be welded frame with 4 nos. of pillars of 1.5 mm thick CRCA sheet of 5 folded profile and welded from top to bottom for reinforcement.		
		This is joined to top cover and bottom cover having air cooled ventilation for exhaust of hot air. Front door having provision of glass as well as perforation with adequate ventilation in the rear door. Both the Side panels are fitted with slam latches for easy removal.		
3	**Frame**	1.5 mm CRCA Multi Fold Fabricated Frame to achieve high structural Strength. Designed to carry load of 1250 Kgs. Easy to Assemble with the SKD design.		
4	**Doors- Single**	Front Glass Door & Rear Single Perforated door		
5	**Support Channels**	Support Channel gets screw fixed directly to front & Rear frame. Gives High strength Load gets divide on robust Welded Frame.		

6	**Top Panel**	Made of 1.2 mm CRCA and concealed from exterior view. Allows provision for 4 nos. Fan mounting. Helps in easy installation like cable tray support		
7	**19" Rails**	4 nos. U marked Rails made of 2mm CRCA sheet. These are adjustable with the depth space provided in the rack.		
8	**Certifications**	Degrees of Ingress Protection, IP 20 according to IEC 60529		
		Degree of Impact Protection, IK 08 according to IEC 62262		
		Corrosion Resistance through Salt Spray test according to ISO 9227 for 168 hours protection		
		Process validations thru' NABL labs Ensures a Compliant & Robust Product		
9	**Weight Capacity**	Weight carrying capacity upto 1250 Kg		
10	**Painting Shade**	RAL 9005 Fine Texture – 60 to 80uM.		
11	**Powder Coating**	Fine texture finish achieved through Epoxy polyester Hybrid Powder		
		60 – 80 Micron powder deposit		
		Fine Texture Finish for Aesthetic appearance		
		High Scratch resistance against any sharp object		
12	**Side Panel**	sheet steel, Removable Side panels, single point locking with quick release latches		
13	**Cooling Fans**	Fan's -230V AC - 90 CFM, dB 42		
14	**Power box**	Power Distribution Unit - 06/13 or 6/16 Amp Multi-Standard - 6 Socket		
15	**Castor**	Set of 4 castors (2"/3" height), 2 of brakes on front side and 2 without brakes		
16	**Mounting Hardware**	Mounting Hardware Packets with set of M 6 screw, Cage Nuts and Washer set of 10 or 20		
17	**42U Dimensions**	800WX1000D		
18	**Packaging**	5 Ply Carton packaging with edge protectors		

10. LAN Cabling

S. No.	Item	Specification	Compliance (Y/N)	Deviation (If any)
1	CAT 6 cable	ISI /ISO approved		
2	Conduit	ISI /ISO approved		
3	I/O Boxes	ISI /ISO approved		
4	Penta Scanning	Bidder to obtain Penta scanning certification for 25 years.		

Company Seal   **Authorized signatory of company**

Place: _____

Date: _____

ACCEPTANCE OF TERMS AND CONDITIONS BY THE VENDOR

We hereby agree to all the terms and conditions as given in Tender No.Hafed/MSD/IT/2041 dated 10.12.2021.

Company Seal   **(Authorised Signatory of Company)**

Place : _____

Date : _____

CERTIFICATE TO BE FURNISHED BY THE VENDOR

1. The cable once laid will be subjected to an inspection by HAFED at the given consignee location**.** The details of the procedure will be worked out jointly between the **vendor** and the **Customer.** The specifications of the cable will be in conformity with the details provided by the user and as per given specifications.
2. We shall provide onsite comprehensive warranty of one year for the items being supplied.
3. We agree to deposit a bank guarantee as per tender enquiry. **The Bank Guarantee will be valid till expiry of the warranty plus two months.**
4. We certify that any cost incurred on additional items/ systems/ components / accessories required would be borne by us.
5. We also certify that we are not black listed by any Government department

Company Seal (Authorised Signatory of Company)

Place : _____

Date : _____

LIST OF GOVT PROJECTS AWARDED

S No	Organization	Details of Project including cost	Contact person for the organization with telephone number for confirmation
1.			
2.			
3.			
4.			
5.			
6.			
7.			

Note: -   The vendors to attach the copy of supply orders as required in the eligibility criteria.

Company Seal   **(Authorised Signatory of Company)**

Place : _____

Date : _____

OEM AUTHORIZATION

The Managing Director
The Haryana State Cooperative Supply &
Marketing Federation Limited
Corporate office, Sector 5,
Panchkula, Haryana

We _____ (Name of OEM), manufacturers of _____ _____ (Brand of products) having registered office at _____ (Address) hereby authorized M/S_____ (Name and location of Vendor) to quote, negotiate and supply _____ (Type of items like _____ etc.) against tender enquiry No Hafed/MSD/IT/2041 dated 10.12.2021.

Sign of authorized person   Office Stamp
Name: Date

Designation:

Contract No:

E-mail ID:

LIST OF CONTACT PERSON FOR SALES SERVICE SUPPORT

S No	Name of office	Complete address	Contact information: Contact person - Email id - Contact number -
1.			
2.			
3.			
4.			
5.			
6.			
7.			

Company Seal   **(Authorised Signatory of Company)**

Place : _____

Date   : _____