Tender Document

Tender for the following for Networking of University Campus

S.No.	Particulars	
1.	Active & Passive Components of Networking Materials	
2.	Accessories for the structuring materials	
3.	Digging and Laying of OFC Cables	

For

Annamalai University, Annamalainagar

Tender No: AU/GUCC/RUSA 2.0/AIC/Network Equipments /Tender/02/2019-20



Registrar i/c

Annamalai University

Annamalainagar 608 002

Tel: 04144-238259, Fax: 04144-238080

Visit us at http://www.annamalaiuniversity.ac.in

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TENDER NOTICE

EX X CA EX X CA NUTH COURAGE MODELITY	THE REGISTRAR, ANNAMALAI UNIVERSITY, ANNAMALAINAGAR – 608 002
Office of Issue	The Registrar , Annamalai University, Annamalainagar – 608 002
Tender No.	AU/GUCC/RUSA 2.0/AIC/ Networking Equipments/Tender/02/2019-20
Date and Time of Issue/Publishing	10.08.2020 - 10:45 a.m.
Document Download/Sale Start Date & Time	10.08.2020 - 10:45 a.m.
Tender Submission Start Date & Time	10.08.2020 -10:45 a.m.
Tenders Submission Last Date & Time	28.08.2020 - 05.00 p.m
Date and Time of opening of Technical bid	29.08.2020 - 10:30 a.m.
Place of opening of Technical bid	Syndicate Room, Administrative Building, Annamalai University, Annamalainagar – 608 002
Date of opening of Price bid	To be intimated later

Sealed Tenders are invited on behalf of Annamalai University. Tenders are invited for **the following** for Annamalai University from the **Indian Companies of Original Equipment Manufacturers (OEM)** or **Authorized distributors /**

Signature of the Tenderer

Part I

Authorized Dealers. Prices quoted should be F.O.R. Destination, inclusive of all levies and taxes and packing & forwarding charges etc.

S.No.	Particulars	
1.	Active & Passive Components of Networking Materials	
2.	Accessories for the structuring materials	
3.	Digging and Laying of OFC Cables	

Tenderer shall have to deposit **separate EMD** as detailed below in the form of Demand Draft drawn on any scheduled bank payable at Annamalainagar in favour of <u>"The Registrar, Annamalai University, Annamalainagar - 608002"</u> along with the tender.

S.No.	Particulars	EMD Amount Rs.
1.	Active & Passive Components of Networking Materials	70,000
2.	Accessories for the structuring materials	15,000
3.	Digging and Laying of OFC Cables	30,000

Tender Document fee is Rs.2,100/- (Rupees Two thousand and one hundred only)foreachtenderanddocumentisavailableinWebsitewww.annamalaiuniversity.ac.in&www.tenders.tn.gov.in.SeparateTenderDocument to be submitted for the above three items.

Registrar i/c, Annamalai University Contact No. 04144-238259

Part II

TENDER CONDITIONS

1. <u>Introduction</u>

1.1. This tender is for the following for networking of University Campus of Annamalai University, Annamalainagar, Chidambaram, India.

No.	File No.	Description
1.		Active & Passive Components of Networking Materials
2.	AU/GUCC/RUSA 2.0/ AIC / Networking Equipments/ Tender/ 02/2019-20 AIC / Accessories for the strue materials	
3.		Digging and Laying of OFC Cables

The specification for the above mentioned items is given in Appendix VI.

1.2. Applicability of Tamil Nadu Transparency in Tenders Act and Rules: This tender will be governed by the Tamil Nadu Transparency in Tenders Act 1998 and Rules 2000 as amended from time to time.

2. Eligibility criteria

2.1. A tenderer will be eligible for tendering only if he satisfies the eligibility criteria as given below:

- a) A tenderer should be a manufacturer possessing a valid manufacturing license from the competent authority for manufacturing the items quoted and should have at least three years experience. (Documentary evidence to be furnished)
- b) The manufacturer should be an ISO:9001 / Equivalent certified company. Documentary evidence should be enclosed.
- c) Authorized Dealer / Distributor / Supplier can also bid with authorization from the Manufacturer. (Documentary evidence to be furnished). A manufacturer shall not authorize more than one dealer / distributor/supplier for participating in this tender.

- d) In case a tenderer is participating as an authorized Dealer/Distributor/Supplier, the manufacturer of the item should satisfy the conditions mentioned at (a) and (b) above.
- e) The tenderer should have a GST Registration. Copy of the Registration Certificate should be enclosed.
- f) The Tenderer should be an Income Tax assesse. (latest return filed should be enclosed)

2.2 The tenderer should not have been blacklisted or debarred from participating in tenders by any Central / State Government agencies or autonomous bodies or universities/ institutions. (An undertaking to this effect should be furnished)

2.3 The tenderer submitting their offer must have supplied/worked for similar items to other Universities or institutions or Government agencies. <u>Copies of such order must be enclosed with the offer</u>.

3. Cost of Tendering

The Tenderer Document Fee is Rs.2,100/- and may download the application format from the University Web Site. Separate Tender Document to be submitted for the above three items.

The Tenderer shall bear all costs associated with the preparation and submission of this Tender and the tender inviting authority will in no way be responsible or liable for these costs.

4. General Instructions

4.1. The tenderers are requested to go through the instructions, terms and conditions and specifications given in the tender. Failure to furnish all required information in every aspect will be at the tenderer's risk and may result in the rejection of the tender.

For any queries, tenderer may contact:

The Registrar i/c, Annamalai University, Annamalainagar, Chidambaram – 608 002. Tamil Nadu, INDIA.

4.2. Clarification on the tender

A prospective tenderer requiring any clarification on the tender may request the Office of the Registrar, Annamalai University, by a letter or by fax. The Registrar, Annamalai University, will respond in writing to any request for clarification in the tender.

4.3. Amendments to the Tender

- i. Tender Inviting Authority may amend the tender wherever it is felt that such an amendment is absolutely necessary.
- ii. Amendment to tender may also be given in response to clarifications by prospective tenderers and it is solely the discretion of the Tender Inviting Authority. Any amendment to the tender will be uploaded on the website <u>http://www.annamalaiuniversity.ac.in</u> and <u>www.tenders.tn.gov.in</u>. It is the responsibility of the tenderer to verify the amendments if any and get the amendment documents before the submission of the tender provided no such change could be effected 48 hours prior to the time fixed for opening of the tender.
- **4.4.** The **Tender document is not transferable** under any circumstances.

5. Earnest Money Deposit (EMD)

5.1. The tenderer should furnish Earnest Money Deposit (EMD) as detailed below along with the tender by way of Demand Draft/Bankers cheque obtained from any Nationalized/ Scheduled Bank and drawn in favour of "The Registrar, Annamalai University" payable at Annamalainagar or Chidambaram. Separate Tender Document to be submitted for each item.

S.No.	Particulars	EMD Amount Rs.
1.	Active & Passive Components of Networking Materials	70,000
2.	Accessories for the structuring materials	15,000
3.	Digging and Laying of OFC Cables	30,000

5.2. Any tender without required EMD will be considered as NON-RESPONSIVE and will be summarily rejected.

5.3. The Tender Inviting Authority will arrange to refund the Earnest Money Deposit to the unsuccessful tenderers after publishing the list of successful tenderers, within a reasonable time.

5.4. No interest will be paid on the EMD.

5.5. The EMD is liable to be forfeited if:

- i. The Tenderer withdraws his tender at any stage after the last date and time fixed for submitting the tender.
- ii. The Tenderer on becoming successful, fails to furnish the required security deposit or sign the agreement, within the stipulated time limit.

6. <u>Performance Security :</u>

i. Successful tenderer has to furnish Security Deposit equivalent to 5% of the tendered value in the form of Demand Draft drawn in favour of "The Registrar, Annamalai University".

ii. Security Deposit will be released only after the expiry of the warranty period as mentioned in Part – IV - clause 1.5.

Part III

PROCEDURE FOR SUBMISSION OF TENDER

1. Submission of Tender:

1.1 Due Date for Tender Submission

- i. The tender document duly filled in, signed on all pages shall be submitted in sealed cover to the Registrar, Annamalai University, at his office upto 5.00 P.M. on <u>28.08.2020</u> as per the procedure laid down herein. The tender can be submitted on all working days upto the above closing date. In the event of this day being declared as a holiday, the tenders can be submitted till 5.00 P.M. on the following working day.
- ii. The tender inviting authority will not be held responsible for any delay in the receipt of the Bank Draft or any delay in the receipt of the document by the tenderer including loss of the document in transit or delay in obtaining any document / certificate or on any other account. No extension of the date and time for the submission of the documents will be given for any such delay.
- iii. The tender inviting authority may extend the due date for submission of tender by issuing an amendment, in which case, all the rights and obligations of the Tender Inviting Authority and the Tenderers previously subject to the original due date for submission will then be subject to the new date for submission.
- iv. Any tender received by the Tender Inviting Authority after the due date and time will not be considered and will be returned to the tenderer.

1.2 Procedure for Submission of Tender

- i. Tenderers are advised to go through the tender documents and understand all the provisions and stipulations contained therein before submitting the tender.
- ii. The tender shall be submitted as per the procedures and requirements stipulated herein.

- iii. Tender submitted by fax will not be accepted and will be summarily rejected.
- iv. The Commercial bid should be neatly typed. Hand written offers will be rejected. Any deviation in the offer shall lead to rejection.
- v. The tenderer who are supplying imported material, must be registered with the Competent Authority/Department of the Government of India.
- vi. The purchaser shall not be responsible for any postal delay in receipt of the offer. Any bid received by the Purchaser which does not fulfil the required terms and conditions shall be rejected outrightly and no communication in this regard shall be sent. Delayed/Late bids will not be accepted, at any circumstances.
- vii. All the bids will be opened in the presence of bidders representatives, who, choose to attend the same as per the date and time specified in the Tender Document.
- viii. This tender is based on two-cover systems i.e. Technical bid and price bid. Therefore, the tender shall be submitted in two parts viz. Cover A and Cover B. Each part shall be placed in an independent sealed envelope and shall be superscribed as follows

Cover-A : "TECHNICAL BID COVER"

1(a) "TENDER FOR SUPPLY OF ACTIVE & PASSIVE COMPONENTS OF NETWORKING MATERIALS TO ANNAMALAI UNIVERSITY"

(OR)

2(a) "TENDER FOR SUPPLY OF ACCESSORIES FOR THE STRUCTURING MATERIALS TO ANNAMALAI UNIVERSITY"

(OR)

3(a) "TENDER FOR DIGGING AND LAYING OF OFC CABLES TO ANNAMALAI UNIVERSITY"

TENDER No.: AU/GUCC/RUSA 2.0 /AIC/Networking Equipment/02/2019-20

Cover-B : "PRICE BID COVER"

1(b) "TENDER FOR SUPPLY OF ACTIVE & PASSIVE COMPONENTS OF NETWORKING MATERIALS TO ANNAMALAI UNIVERSITY"

(OR)

2(b) "TENDER FOR SUPPLY OF ACCESSORIES FOR THE STRUCTURING MATERIALS TO ANNAMALAI UNIVERSITY"

(OR)

3(b) "TENDER FOR DIGGING AND LAYING OF OFC CABLES TO ANNAMALAI UNIVERSITY"

TENDER No.: AU/GUCC/RUSA 2.0 /AIC/Networking Equipment/02/2019-20

The contents of each of the two covers shall be as described in the subsequent clauses. For all other references, these covers will be referred to briefly as "**Technical Bid Cover**" and "**Price Bid Cover**".

Both the covers i.e. Cover-A and Cover-B, shall be placed inside an outer cover and shall be superscribed as follows:

1. "TENDER FOR SUPPLY OF ACTIVE & PASSIVE COMPONENTS OF NETWORKING MATERIALS TO ANNAMALAI UNIVERSITY" (OR)

2. "TENDER FOR SUPPLY OF ACCESSORIES FOR THE STRUCTURING MATERIALS TO ANNAMALAI UNIVERSITY"

(OR)

3. "TENDER FOR DIGGING AND LAYING OF OFC CABLES TO ANNAMALAI UNIVERSITY"

TENDER No.: AU/GUCC/RUSA 2.0 /AIC/Networking Equipment/02/2019-20

ix. The sealed tender envelope shall be addressed to

The Registrar i/c, Annamalai University, Annamalainagar – 608 002, Chidambaram, Tamil Nadu, India

- x. The tender envelope shall carry the name and address of the Tenderer prominently with Phone No. / email ID / and FAX No.
- xi. The **Technical Bid Cover** (**Cover-A**) shall contain the following as per the sequence indicated below.

1.	Tender Document Fee of Rs.2,100/- as per clause- 3 of the Tender Document	
2.	Earnest Money Deposit (EMD) of as per clause-5 of the Tender document	
3.	Application form for supply of equipment as per Appendix-1	
4.	Documentary evidence for payment of income tax (latest income tax return should be furnished)	
5.	Letter of Tender as per Appendix-2	
6.	Documentary evidence for registration under GST	
7.	Documentary evidence for ISO:9001 / equivalent certified company	
8.	A copy of Manufacturing license/Registration Certificate	
9.	Authorization from Manufacturer in case of Authorized Dealers/Distributors/Suppliers	
10.	Documentary evidence of supplying similar items to other Universities/Institutions/Govt. agencies.	
11.	In addition to the above any document or certificates, etc., mentioned anywhere in the tender document shall also be a part of the technical tender requirements.	

xii. The **PRICE BID COVER** (**Cover-B**) shall contain the Price Bid as per the format given in Appendix – III.

The tenderer shall not carry out any alteration in the format prescribed for Price Bid. The tenderer shall not enclose any other document or statement that will influence the price. In such an event, the tender inviting authority shall summarily reject the tender.

1.3. Signing of the Tender

The tender shall be signed by a person or persons duly authorized to sign on behalf of the Tenderer. All pages of the tender shall be signed by the person or persons signing the tender. <u>The tenderer shall enclose a certified copy of the</u> <u>power of attorney authorizing the signatory or signatories to sign the tender</u> <u>document.</u> This certification shall be from the Managing Director or the Legal Manager of the firm.

The tender shall contain no alterations or additions, except those to comply with instructions issued by the Tender Inviting Authority, or as necessary to correct errors made by the tenderer, in which case such corrections shall be signed by the person or persons signing the tender.

All the pages in the tender document should be signed by the tenderer, after filling the prices in figures & words.

Part IV

GENERAL TERMS AND CONDITIONS

1.1. Delivery Schedule:

The Price Quoted should be FOR CHIDAMBARAM/ ANNAMALAINAGAR

- i. Materials should be door delivered at Annamalai University, Annamalainagar, Chidambaram, Tamilnadu.
- ii. Delivery must be made within a period of 45 days from the issue of the order either directly or through their dealer network unless otherwise specified.
- iii. If the supplier fails to deliver the equipment ordered within the allotted delivery period as specified above, the Purchaser may procure goods or services similar to those un-delivered upon such terms and in such manner as it deems appropriate from any other firm at the risk and cost of the supplier.

1.2 Payment Terms:

- i. Payment will be made within 30 days from the date of delivery, installations, commissioning and demonstration of the equipment and acceptance by concerned Department/ Section.
- ii. **Payment shall be made by Cheque/ PFMS or such other mode**/ electronic fund transfer offered by the Bank.

1.3 Taxes & Duties :

 Annamalai University is registered with the Department of Scientific and Industrial Research (DSIR) for purposed of availing Customs Duty exemption in terms of Notfn.No. 51/96- Customs, dated 23.07.1996, Notn.No. 47/2017 – Integrated Tax (Rate), dated 14.11.2017 and Notn.No. 45/2017 – Central Tax (Rate), dated 14.11.2017, Notfn No.45/2017 – Union Territory Tax (Rate), dated 14.11.2017.

- ii. As per Govt. of India Notification 51/96 Customs dated 23rd July 1996, Annamalai University, Chidambaram, is exempted from Custom duty for all research equipment. The University shall provide all the documents under this notification to enable the supplier to clear the goods without payment of Custom duty, whenever required. Supplier should state clearly that this certificate is required.
- iii. GST may be charged as applicable against DSIR Certificate. Any statutory variation will be paid to supplier on documentary evidence. Supplier should clearly indicate the percentage of GST applicable.
- iv. Clearing & forwarding charges should also be mentioned

1.4 Loss, Damage & shortage :

Annamalai University shall not be responsible for any loss, damages and shortage during transit. Payment shall be made for the ordered material received in good condition only.

1.5 Warranty

The equipment supplied under the contract shall carry a warranty for at least Five years. Supplier shall extend free maintenance service during the warranty period.

1.6 Commissioning and Demonstration

The Supplier shall be responsible for commissioning of the equipment. Supplier should also arrange for demonstration of the equipment to the Staff of the University.

1.7 Annual Maintenance

The University reserves the right to entrust Annual Maintenance of the equipment supplied under this tender to the concerned supplier. Therefore the tenderer shall mention the annual maintenance charges AMC/SMC in the price schedule after warranty period. Tenderer should also give a brief write up about the services to be covered under the Annual Maintenance.

1.8 General:

The acceptance of the offer will rest with the Annamalai University who reserves the right to reject/accept partially or wholly the tenders received, without assigning any reason.

- i. Mere submission of tender/ proposal does not imply acceptance of the same at this end and the firms will be finalised only after meeting the laid down qualifying parameters for which decision of the Tender Inviting Authority / Tender Accepting Authority shall be final and binding on the parties.
- ii. Printed terms and conditions of the applicant on their quotation Form/ Literature/ Letter etc. if any, will not be binding on the University.

1.9 Liquidated Damages :

Timely delivery is essence of the contract and hence should any consignment be delayed, liquidated damages at the rate 0.5% of the value of the delayed consignment, for each week or part there of shall be levied and recovered subject to maximum of 5% of total order value.

1.10 Acceptance / Rejection:

The Tender Accepting Authority reserves the right to accept a quotation in part or in full or to reject all quotations or any of the quotations received, for non-compliance of any of the above items, conditions or instructions or for any other reason without assigning any reason thereof.

Part V

OPENING OF TENDER

1.1 Tender Opening

- Tender will be opened in the presence of the tenderers or their authorized representative who choose to be present and the tender scrutiny committee at 10.30 A.M. on <u>29.08.2020</u>. The representative of tenderer who attend the tender opening must produce their identification proof and authorization letter from the companies / tenderer.
- In the event of the specified date of Tender opening being declared a holiday, the tenders will be opened at the same time on the next working day.

iii. Cover-A containing "Technical Bid" shall be opened first.

- iv. On opening the tender, the details such as name of the tenderer, address,Tender Document Fee, EMD details, etc., will be read out.
- v. Tenders found without the Tender Document Fee and EMD or with an invalid or insufficient Tender Document Fee and EMD, will be summarily rejected. Unopened tenders will be returned to such tenderers.
- vi. On verifying the Tender Document Fee and EMD, the Technical bids will be examined to decide their service suitability for the said work. Tenderers whose Technical bids are not found acceptable will be advised of the same and their sealed covers containing the respective Financial Bids will not be opened. Their EMD will also be returned to them.
- vii. Price bids of only those tenderers whose Technical bids are substantively responsive, will be opened.

1.2 Process to be Confidential

- i. Information relating to the examination, clarification, evaluation and comparison of tenders and recommendations for the award of contract shall not be disclosed to tenderers or any other persons not officially concerned with such process until the award to the successful tenderer has been announced.
- ii. Any effort by a tenderer to influence the tender accepting authority, scrutiny / evaluation committee or its members in the processing of tenders or award decisions may result in the rejection of his tender.

1.3 Criteria for Technical Evaluation (Evaluation of Technical Bid)

- i. The tender accepting authority will determine whether the tenderer has fulfilled all the tender conditions as stipulated in the tender document and whether the tender is substantially responsive or not.
- A responsive tender is one which conforms to all the terms, conditions and specifications of the tender documents without material deviation or reservation. A material deviation or reservation is one:

a) Which affects in any substantial way the scope, quality or performance of the contract.

b) Which is a substantial way is inconsistent with the Tender conditions, the tender accepting authority's rights or the Tenderers obligations under the Contract, or

c) Whose rectification would affect unfairly the competitive position of other Tenderers presenting substantively responsive Tenders.

 iii. Tenderers who have not fulfilled the tender conditions shall be a nonresponsive tender and will not be taken up for further evaluation and Price Bid opening.

- iv. To assist the examination, evaluation and comparison of Tenders, the tender accepting authority may at its discretion, ask any tenderer for clarification on his Tender. The request for clarification and the response shall be in writing or by fax but no change in the substance of the Tender shall be so sought, offered, or permitted
- v. When a tender fails to be responsive, it will be rejected by the tender accepting authority and may not subsequently be made responsive by correction or addition / withdrawal of the non-conforming deviation or reservation.

1.4 Price Bid Opening and Evaluation of Price Bid

- The Tender inviting Authority will then proceed with opening of Cover-B,
 i.e., "PRICE BID COVER" of those tenderers whose technical bid has been found substantively responsive. The opening of the "Price Bid cover" will be done in the presence of those tenderers or their representatives who choose to be present. The Tender Inviting Authority will inform such tenderers in advance about the acceptance of their technical tender and the date and time of opening of the "Price Bid Cover".
- ii. The tender will be evaluated based on the prices offered by the tenders for the concerned equipments/work.
- iii. The tender who has bid the lowest evaluated price will be determined considering the following factors:
 - a) the quoted price shall be corrected for arithmetical errors;
 - b) in cases of discrepancy between the prices quoted in words and in figures, lower of the two shall be considered;
- iv. The evaluation shall include all central duties such as customs duty (for the imported items), central excise duty , GST, as a part of the price, as detailed below:-

- a) In evaluation of the price of an imported item, the price has to be determined inclusive of the customs duty;
- b) In evaluation of the price of articles which are subject to excise duty, the price has to be determined inclusive of such excise duty.
- v. Annual Maintenance charges will not be included while evaluating the tender.

2. Award of Tender

2.1 The award of the tender shall be made strictly in accordance with the "Tamil Nadu Transparency in Tenders Act 1998 and Rules 2000 and no deviation will be made.

2.2 Notwithstanding anything that is said herein, the Tender Accepting Authority reserves the right to accept or reject any tender or all tenders, and to cancel the tendering process and reject all tenders, at any time prior to the award of tender, without thereby incurring any liability to the affected tenderer or tenderers or any obligation to inform the affected tenderer or tenderers on the grounds for the tender accepting authority's action.

3. Notification of Award

3.1 The tenderer whose tender has been accepted will be notified by the Tender Accepting Authority, in writing.

3.2. Upon furnishing the security deposit by the successful tenderer or tenderers and upon signing the Agreement (Appendix-4), the EMD will be returned to the unsuccessful tenderer within a reasonable time period.

4. Disputes and Jurisdiction:

Any legal disputes arising out of any breach of contract pertaining to this tender process shall be settled in the court of competent jurisdiction located within the **town of Chidambaram** in Tamil Nadu.

5. Acknowledgement:

It is hereby acknowledged that we have gone through all the conditions mentioned above and we agree to abide by them.

Date:

Signature of Tenderer

Place:

Official seal and address

Appendix-I

APPLICATION FORM FOR SUPPLY OF EQUIPMENT

1. NAME OF THE EQUIPMENT:

2. TENDER NUMBER:

S.NO.	VENDOR DETAILS	
1	Name and Address of the Manufacturer/Firm/Vendor	
	Phone Number	
	Fax	
	E-Mail	
	Contact Person Name	
	Mobile Number	
2	Name and Address of the Local Authorized Dealer/Distributors/ Supplier	
	Phone Number	
	FAX	
	E-Mail	
	Contact Person Name	
	Mobile Number	
3	GST No. of the Firm/Dealer (copy to be enclosed)	
4	PAN No. of the Firm/Dealer (Copy to be attached)	
5	Tender Document Fee (DD No., Date & Amount and issuing Bank)	
6	EMD (DD No., Date & Amount and issuing Bank)	
7	Name of the University/ Government Institutes who have purchased similar equipments from your concern (attach copies)	

7. Declaration by the tenderer.

- i. We hereby declare that all the particulars given in this application are true and complete to the best of our knowledge and belief and we will produce all the relevant documents promptly, if necessary or as and when asked for by Annamalai University, Chidambaram. We understand that information provided by us will serve as Prequalification Criteria for supply of equipment under this tender and in the event of any information being found false or incorrect or ineligibility being detected even after the award of Contract, our contract may be cancelled and all our claims may be forfeited by the Annamalai University, Annamalainagar. We have read and understood all the terms and conditions of the tender and we fully agree to it.
- ii. We also declare that we will not sell our products at a lesser price to other parties than those supplied to Annamalai University and in the event of happening of such situation, we will be bound to refund the difference and our contract may also be cancelled at the discretion of Annamalai University.
- iii. We also undertake that all the terms such as Product Range, Price, Discount, Delivery/other charges, Terms of Payment and also the name/s of the Dealer/ Distributor will remain unchanged during the contract period and no alteration will be done without the approval of Annamalai University.

Date :	Signature	:
Place :	Name	:
	Designation	:
	Seal of the firm	:

Appendix – II

TENDER FOR SUPPLY OF NETWORKING MATERIALS TO ANNAMALAI UNIVERSITY

LETTER OF TENDER

То

The Registrar, Annamalai University, Annamalai Nagar, Chidambaram – 608 002.

Sir,

Sub: Tender for Supply of Active & Passive Components of Networking Materials (or) Digging and Laying of OFC Cables (or) Accessories for the structuring materials.

1) I / We, the undersigned do hereby tender and undertake to Supply of ______ equipment (or) ------ work to Annamalai University in strict accordance with and subject to the terms and conditions set forth or mentioned in the Tender documents and appendices.

2) I / We have gone through the instructions in the tender and carefully read all the conditions of tender and agree to abide by all the conditions mentioned there in.

3)	I / We hereby state that I/we have remitted	_ (Rupees
		. only) in the form of
Dema	and Draft/Bankers Cheque No Dated :	drawn on
		Bank
	Branch, in fav	our of the "Registrar,
Anna	malai University", as Earnest Money Deposit and agree to h	ave it forfeited by the

Annamalai University in case of my / our failure to supply the equipment.

4) I / We hereby certify that the price offered is final and I / We will not come forward for any revision or alteration in rates quoted subsequently due to hike in prices or any other reasons. However I/We are aware of the University's right to negotiate the discount rate while evaluating the tender.

5) I / We confirm that our Tender is in conformity with the technical specifications and commercial terms & conditions as stipulated in the Tender Document and without any deviations whatsoever. I am / We are aware that our Tender is liable for disqualification in the event of technical and commercial deviations observed by the Tender Accepting Authority at a later date during the process of evaluation of our Tender.

6) I / We further declare that the information and documents furnished in the Tender submitted by us are correct and genuine. I am/We are aware of the Tender Inviting Authority's right to forfeit the Earnest Money Deposit and / or Security Deposit and blacklisting me/us if, any information furnished by us proved to be false at the time of inspection and not complying with the tender conditions.

 I/We state that I/We have not been blacklisted or debarred from participating in tenders by any Central/State Government agencies or autonomous bodies or universities / institutions.

8) In the event of my/our tender becoming successful, I/We undertake and agree to forward to the Registrar, Annamalai University, in ten (10) days, after the notification of the acceptance of this tender has been received by us.

9) We undertake and agree that we will not withdraw this Tender during the period that will be required for intimation of acceptance or non-acceptance as stipulated in clause 10 of the Tender document. If I/We do so withdraw, I/We shall forfeit the Earnest Money Deposit to Annamalai University. I/We agree to execute at our cost the Agreement in ten (10) days after the notification of the acceptance of our Tender has been received by us. In the event of our failing to make the Security Deposit or to execute the Agreement in the said manner, the Earnest Money Deposit accompanying this Tender shall be forfeited to the Annamalai University and this concluded Contract

shall in such case be considered as having been cancelled or terminated and I/We agree to be liable, irrespective of the forfeiture aforesaid for all damages, losses, costs, charges and expenses arising from or by reason of such failure and arrangements.

As witness our hand this.....day of.....of 2020.

Signature of the Tenderer				
Name & Address	:			
Company Seal	:			

Appendix – III (A)

PRICE BID FOR ACTIVE & PASSIVE COMPONENTS OF NETWORKING MATERIALS

Sl. No.	Material Description	Technical Details	Qty	Rate/Unit	Total Cost
1	Distribution switch	Layer 3 Distribution switch with 24 10G SFP ports uplink supporting 10G / 40 G	4 No's		
2	24 port Edge Access Switch	Edge switch containing 24 1G copper port with min 2 SFP uplink ports supporting 1G / 10G ports	30 No's		
3	48 port Edge Access Switch	Edge switch containing 48 1G copper port with min 2 SFP uplink ports supporting 1 G/10G ports	1 No		
4	Middle Manageable Access Switch	Middle Management switch with 24 or 26 Gigabit copper port with 2 SFP port	10 No's		
5	LX Fiber Modules	10G/1G Cisco Compatible LX SFP Modules that suits the above mentioned distribution and Edge Switches	60 No's		
6	OFC (Optical Fibre cable)	12 Core Armored FRP, Outdoor Single Mode with TIA 658,ISO 11801, TICEA696 Standards, IEC 60794- 3-10, ITU-T G.652	12000 Mtrs		
7	HDPE PLB Duct with All Accessories like Coupler, End Cap, Simplex Plug etc	40 mm/33mm with ISI Standard	11500 Mtrs		
8	LIU (AMP)	1U 24 port Rack Mount SC - SM Fully Loaded	35 No's		

			,	
9	9U Rack (HCL,VALRACK, D-Link)	Wall mount 9U		
		Adjustable Fully		
		Loaded with Power	25 No's	
		supply Assembled		
		Ready for Installation		
		27U Adjustable Fully		
10	27U Rack (HCL,VALRACK, D_Link)	Loaded with Power	1 No	
10		supply Assembled	1110	
		Ready for Installation		
		AMP CAT 6 24 port		
		I/O Patch panel Fully		
11	I/O Patch Panel Fully Loaded	Loaded with	25 No's	
		individual removable		
		1/0		
		AMP CAT 6 I/O with		
12	I/O (Information Outlet)	Back Box and face	500 No's	
		Plate		
13	UTP Cable	AMP CAT 6 UTP Cable		
15		Coil (305 mtr / coil)		
14	UTP Patch Cord 1 mtr	AMP UTP Patch Cord	500 No's	
15	UTP Patch Cord 2 mtr	AMP UTP Patch Cord	500 No's	
16	OFC Patch	AMP SC-LC OFC Patch	60 No's	
_		Cord		
17	RJ45 Jack	D-Link CAT 6 RJ 45	20 Boxes	
		Jack	(100 pieces	
			each box)	
		RCC Rectangular		
18	OFC Access Chambers	Chamber with	50 no's	
10		length:4ft; Breadth: 2	501105	
		ft; Height: 3 ft.		

** Additional Technical details for Sl.no: 01, 02, 03 & 04

IMPORTANT NOTE:

- 1) The price quoted above shall be inclusive of all taxes and charges except GST.
- 2) GST shall be mentioned separately.
- 3) FOR; Destination as given in the purchase order.
- 4) Warranty period for the above items must be at least 5 years from the date of installation.

- 5) Annual Maintenance Charges (after expiry of warranty period)
- 6) Certified Training must be provided to the faculty members and research scholars after the successful installation of the Equipment.

Signature:

Name:

Designation:

Seal of the Firm:

Appendix – III (B)

PRICE BID FOR ACCESSORIES FOR THE STRUCTURING MATERIALS

SI. No.	Material Description	Technical Details	Qty	Rate/Unit	Total Cost
1	1.5 PVC Pipe - 3/4"	Kundan Premium /Alwaplast/Senbaga or equivalent	1250		
2	1.5 PVC Pipe - 1"	Kundan Premium /Alwaplast/Senbaga or equivalent	4000		
3	1.5 PVC Pipe - 1.5"	Kundan Premium /Alwaplast/Senbaga or equivalent	1100		
4	PVC Bend - 3/4"	Kundan Premium /Alwaplast/Senbaga or equivalent	500		
5	PVC Bend - 1"	Kundan Premium /Alwaplast/Senbaga or equivalent	1500		
6	PVC Bend - 1.5"	Kundan Premium /Alwaplast/Senbaga or equivalent	500		
7	PVC L - 3/4"	Kundan Premium /Alwaplast/Senbaga or equivalent	500		
8	PVC L-1"	Kundan Premium /Alwaplast/Senbaga or equivalent	500		
9	PVC L - 1.5"	Kundan Premium /Alwaplast/Senbaga or equivalent	300		
10	PVC joint Coupler 1.5	Kundan Premium /Alwaplast/Senbaga or equivalent	500		
11	2 Way Junction1 "	Royal / Athirai or equivalent	200		
12	3 Way Junction1"	Royal / Athirai or equivalent	500		
13	4 Way Junction1"	Royal / Athirai or equivalent	300		
14	2 Way Junction1.5"	Royal / Athirai or equivalent	200		

15	3 Way Junction1.5"	Royal / Athirai or equivalent	500	
16	4 Way Junction1.5"	Royal / Athirai or equivalent	300	
17	Clamp ¾ "	ISI certified	5500	
18	Clamp 1"	ISI certified	15000	
19	Clamp 1.5"	ISI certified	4500	
20	Plug wood (20 pkt Bundle)	ISI certified	100	
21	Star Screw ¾"	ISI certified	3000	
22	Star Screw 1"	ISI certified	2000	
23	Star Screw 1.5"	ISI certified	2000	
24	Steel Nail	ISI certified	20 kg	
25	5 Amp Switch	Anchor/G.M or Equivalent	100	
26	5 Amp Socket	Anchor/G.M or Equivalent	100	
27	15 Amp Switch	Anchor/G.M or Equivalent	50	
28	15 Amp Socket	Anchor/G.M or Equivalent	50	
29	Switch Box 14* 4	G.M/ Kundan or Equivalent	25	
30	Switch Box 4*4	G.M/ Kundan or Equivalent	25	
31	1.5 Copper Wire	Anchor/G.M/ Kundan or Equivalent	5 coil	
32	Tape Roll	G.M or Equivalent	100	
33	Drilling Bit 6 MM	Bosch or Equivalent	10	
34	Drilling Bit 8 MM	Bosch or Equivalent	10	
35	Drilling Bit 26 MM	Bosch or Equivalent	2	
36	Drilling Bit 32 MM	Bosch or Equivalent	2	
37	Capping Casing 1"	ISI certified	1500	

38	Capping Casing 1.5"	ISI certified	1000	
39	Capping casing 2 "	ISI certified	750	
40	Slotted Duct	ISI certified	500mtr	
41	Rocket Bolt Net 8 mm	ISI certified	50	
42	Rocket Bolt Net 6mm	ISI certified	50	
43	1/2 Flexible House (Steel)	ISI certified	50	
44	1" Flexible House (Steel)	ISI certified	50	
45	1.5 " Flexible House (Steel)	ISI certified	50	
46	¾ " Flexible House (Steel)	ISI certified	50	
47	4*2 * 3 ft Rectangular Manhole Chamber		50	

** All the Listed PVC Materials should meet EPC 80 Schedule and ISO Standards

IMPORTANT NOTE:

- 1) The price quoted above shall be inclusive of all taxes and charges except GST.
- 2) GST shall be mentioned separately.
- 3) FOR; Destination as given in the purchase order.
- 4) Warranty period for the above items must be at least 5 years from the date of installation.
- 5) Annual Maintenance Charges (after expiry of warranty period)
- 6) Training must be provided to the faculty members and research scholars after the successful installation of the Equipment.

Signature:

Name:

Designation:

Seal of the Firm:

Appendix – III (C)

PRICE BID FOR DIGGING AND LAYING OF OFC CABLES WITH HDPE PIPES

S.	Zone	D Rate/Me	igging eter:		HDPE eter:	Rate/Me	OFC eter:	Total
No.		Length (m)	Total Cost (Rs.)	Length (m)	Total Cost (Rs.)	Length (m)	Total Cost (Rs.)	Cost Rs.

Signature:

Name:

Designation:

Seal of the Firm:

Appendix – IV

CONTRACT AGREEMENT

NOW THIS AGREEMENT WITNESSETH AS FOLLOWS:

- **1.** In this Agreement words and expressions shall have the same meanings as are respectively assigned to them in the Conditions of Tender referred to, and they shall be deemed to form and be read and construed as part of this agreement.
- **2.** The following documents shall be deemed to form, be read and construed as part of this Agreement, viz;
 - a) The letter of Acceptance issued by the purchaser.
 - b) The Notice Inviting Tender.
 - c) The supplier's bid including enclosures, appendixes, documents, Price Catalogue etc.
 - d) The Tender Document including various Terms and Conditions.
 - e) Any other document listed in the Tender document.
- **3.** In consideration of the payments to be made by the Purchaser to the Supplier within thirty (30) days from the date of delivery and acceptance by concerned department/ section.
- **4.** The warranty period is ______ years.

5. The AMC/SMC for the subsequent year after the warranty period will be as follows.

For the First year after the expiry of the warranty	
For the Second year after the expiry of the warranty	
For the Third year after the expiry of the	
warranty	
For the Fourth year after the expiry of the	
warranty	
For the Fifth year after the expiry of the	
warranty	

IN WITNESS whereof the parties here to have caused this Agreement to be executed in accordance with their respective laws the day and year first above written.

Signed, Sealed and Delivered by the Said (For the Supplier) in the presence of

Signature

Name & Address

Signed, Sealed and Delivered by the Said (For the Purchaser) in the presence of

Signature

Name & Address

<u>Appendix – V(A)</u>

TENDER NO.: AU/GUCC/RUSA 2.0/AIC/ Network Equipment/ Tender/02/2019-20

EQUIPMENT: ACTIVE & PASSIVE COMPONENTS OF NETWORKING MATERIALS

SI. No.	Item	Technical Specification
1	Distribution switch	Layer Distribution switch with 24 10G SFP ports uplink supporting 10G / 40 G
2	24 port Edge Access Switch	Edge switch containing 24 1G copper port with min 2 SFP uplink ports supporting 1G / 10G ports
3	48 port Edge Access Switch	Edge switch containing 48 1G copper port with min 2 SFP uplink ports supporting 1 G/10G ports
4	Middle Manageable Switch	Middle Management switch with 24 or 26 Gigabit copper port with 2 SFP port
5	LX Fiber Modules	10G/1G Cisco Compatible LX SFP Modules that suits the above mentioned distribution and Edge Switches
6	OFC (Optical Fibre cable)	12 Core Armored FRP, Outdoor Single Mode with TIA 658,ISO 11801, TICEA696 Standards, IEC 60794-3-10, ITU-T G.652
7	HDPE PLB Duct with All Accessories like Coupler, End Cap, Simplex Plug etc	40 mm/33mm with ISI Standard
8	LIU (AMP)	1U 24 port Rack Mount SC - SM Fully Loaded
9	9U Rack (HCL,VALRACK, D_Link)	Wall mount 9U Adjustable Fully Loaded with Power supply Assembled Ready for Installation
10	27U Rack (HCL,VALRACK, D_Link)	27U Adjustable Fully Loaded with Power supply Assembled Ready for Installation
11	I/O Patch Panel Fully Loaded	AMP CAT 6 24 port I/O Patch panel Fully Loaded with individual removable I/O
12	I/O (Information Outlet)	AMP CAT 6 I/O with Back Box and face Plate
13	UTP Cable	AMP CAT 6 UTP Cable Coil (305 mtr / coil)
14	UTP Patch Cord 1 mtr	AMP UTP Patch Cord
15	UTP Patch Cord 2 mtr	AMP UTP Patch Cord
16	OFC Patch	AMP SC-LC OFC Patch Cord

SPECIFICATION

17	RJ45 Jack	D-Link CAT 6 RJ 45 Jack
18	()F(Access (hambers	RCC Rectangular Chamber with length: 4ft; Breadth: 2 ft; Height: 3 ft.

DETAILED SPECIFICATION FOR DISTRIBUTION SWITCH

Distribution Switch			
Sl.No.	Description	Whether Complied (Yes/No)	Data sheet /Supporting Documents Cross- Reference Page / Point Number
		Model	
1	Hardware and interface requirements		
	The Switch should be a Layer 3 modular switch with all		
1.1	required hardware and software to meet below		
1.1	specifications and should be from the same OEM as the		
	access switch running the same OS		
1.2	The Switch should have same Operating Systems the		
1.2	core and access switches proposed.		
	Switch should have 24 x 1/10G SFP+ ports and minimum		
1.3	2 additional free slots for future expansion up to 40 x		
	1/10G ports in a single switch		
1.4	Switch should support stacking bandwidth of minimum		
1.7	160Gbps and should have dedicated ports for the same.		
1.5	Should be capable of increasing the stacking bandwidth		
1.5	upto 960Gbps		
1.6	The switch should scale up to 480 x 1/10G SFP+ ports in		
	a single stack		
	Should support Virtual Port Concentrator or equivalent		
1.7	technology to support dual homing of access switches		
	and servers in active - active configuration to the two		
	core switches		
1.8	Should have 1.5 -GHz dual-core CPU with minimum 8 GB		
	of memory and 32 GB of solid-state drive (SSD) storage.		
	Switch should have an internal hot swappable		
1.9	redundant power supply and field-replaceable fan trays		
4.40	from day 1		
1.10	Switch should have front to back airflow		
2	Performance requirements		
2.1	Should support wirespeed switching throughput of minimum 1.44Tbps		
2.2	Should support distributed Layer 2 and Layer 3 forwarding of minimum 1 Bpps		
3	Layer 2 Switching		
3.1	Switch should support minimum 250K MAC addresses		

3.2	Switch should support Jumbo frames – 9,000 bytes	
	Switch Should support MACsec features on all 10GbE	
3.3	access ports.	
3.4	Switch Should support minimum 4000 VLAN's and VLAN	
5.1	ID's	
3.5	Switch Should support Port-based VLAN and MAC-based VLAN	
3.6	Switch Should support 802.1Q VLAN tagging	
4	Layer 3 Routing, Multicast & MPLS	
	Switch should have following IPv4 & IPv6 routing	
4.1	enabled from day 1 - Static, RIPv1/v2, RIPng, OSPFv2,	
	OSPFv3. Required licenses to be installed from day 1	
4.2	Switch should support following IPv4 & IPv6 routing	
4.2	with an additional license - BGP, IS-IS & MPLS	
	Switch should support PIM sparse mode (PIM-SM),	
4.3	source-specific multicast (SSM) and Bidirectional	
	Forwarding Detection (BFD) for PIM	
	Switch should support Internet Group Management	
4.4	Protocol (IGMP) v1, v2, v3 and multicast listener	
	discovery (MLD) v1 and v2	
4.5	Support for up to 128K IPv4 and 64K IPv6 routes per	
7.5	system	
4.6	Switch should support RSVP and LDP based MPLS LSP's	
4.7	Switch should support Connecting IPv6 Islands over IPv4	
4.7	MPLS using IPv6 Provider Edge Routers (6PE)	
4.8	Switch should support VRF-lite and MPLS VPNs as	
4.0	described in RFCs 2547 and 4364	
4.9	Switch should support MPLS QoS and MPLS OAM	
5	Quality of Service (QoS) requirements	
5.1	Switch should support Layer 2 IEEE 802.1p (class of	
5.1	service [CoS])	
5.2	Switch should have minimum 12 hardware queues per	
5.2	port (8 unicast and remaining for multicast)	
5.3	Should support Layer 2 classification based on Interface,	
	MAC address, Ethertype, 802.1p and VLAN	
5.4	Should support Priority-based flow control (PFC) - IEEE 802.1Qbb	
5.5	Should support Enhanced Transmission Selection (ETS)-	
	IEEE 802.1Qaz	
5.6	Should support DataCentre Bridging Exchange Protocol (DCBX), DCBx, FCoE, and iSCSI	
6	System Management and Administration	
6.1	Switch management using 10/100/1000-Mbps	
6.1	management or console ports	
6.2	CLI-based console to provide detailed out-of-band	
6.2	management	

6.3	Switch should have Port-based locator and beacon LEDs		
	Switch should support Configuration synchronization &		
6.4	Configuration rollback		
	Switch should support Secure Shell Version 2 (SSHv2) &		
6.5	Telnet		
	Switch should support Authentication, authorization,		
6.6	and accounting (AAA) via TACACS+ and RADIUS		
	Switch should have Syslog & provide an Embedded		
6.7	packet analyzer		
6.0	Switch should support SNMPv1, v2, and v3 and have		
6.8	Enhanced SNMP MIB support		
6.9	Switch should support XML (NETCONF) based		
0.9	configuration		
6.10	Switch should support integration with Openstack SDN		
0.10	orchestrator		
7	Security features		
7.1	Switch should support Ingress & Egress ACLs (standard		
7.1	and extended)		
7.2	Standard and extended Layer 2 ACLs: MAC addresses,		
1.2	protocol type		
	Standard and extended Layer 3 and 4 ACLs: IPv4 and		
7.3	IPv6, Internet Control Message Protocol (ICMP and		
	ICMPv6), TCP, User Datagram Protocol (UDP)		
7.4	Should support MPLS access control list (ACL) / policers		
7.5	Switch should have a DHCP Server		
7.6	Should support IP source guard, Dynamic ARP		
	Inspection and DHCP Snooping		
8	High Availability		
	Switch should support Hitless ISSU (In Service Software		
8.1	Upgrade) to ensure that Routing Engines can be		
0.1	upgraded without impacting traffic flow on the ports		
	connected to access switches and servers		
	Each switch should be provided with all required		
8.2	hardware and software to enable above mentioned		
	Hitless ISSU		
0 7	Switch should support Active/Active cluster of two core		
8.3	switches to provide sub-second failover and full utilization of all links connected to the Core Switches		
	Primary and Backup Routing Engines in a cluster should		
	be kept synchronized at all times to enable rapid		
8.4	stateful routing engine failover and Non-Stop		
	Forwarding in case of Routing Engine failures		
-	Should have Hot-swappable field-replaceable power	1	
8.5	supplies and fan modules with N + 1 redundancy		
9	<i>Certifications and Environment compliance</i>		
9.1	Should be compliant to ROHS 6/6		
J.1		1	

9.2	Should have safety certification UL-UL60950, CB- IEC60950-1, EN 60825-1.	
9.3	Should have EMC certifications FCC 47CFR Part 15 Class	
9.4	A, VCCI Class A, CE. operating temperature - 0 to 40 degree Celcius	
9.5	The OEM should listed in both latest DC networking and wired /wireless magic quadrants of Gartner and should be a leader in any one of the category for the past 2 years.	
9.6	Should be NDcPP certified . Necessary document proofs to be attached	
10	Warranty	
10.1	Switch should be provided with hardware replacement OEM warranty and ongoing software upgrades for all major and minor releases for a period of 1 year with 24x7 TAC support from OEM	

DETAILED SPECIFICATION FOR ACCESS SWITCH

	ACCESS SWITCH			
SI.No.	Access Switch	Whether Complied (Yes/No)	Data sheet /Supporting Documents Cross- Reference Page / Point Number	
1	Hardware and interface requirements			
1.1	The switch should be an enterprise grade stackable switch and not a SMB switch with minimum 24 x 10/100/1000Base-T ports and 2 x dedicated 1/10G SFP+ uplink ports .The proposed switch should be listed under the enterprise category of the OEM and not under the SMB catergory of the OEM			
1.2	The switch model should be capable of stacking with non-PoE and PoE models as well as with multigigabit models also from day 1.			
1.3	The switch should support a stack of minimum 4 switches			
1.4	The switch should have 2 x dedicated stacking ports in addition to above mentioned uplink ports. Any additional ports / modules required for the same shall be provided on day one			
1.5	The switch should use industry standard cables/transceivers to form the stack .			
2	Performance requirements			
2.1	Switch should support a switching bandwidth of 128 Gbps for line rate performance of a fully populated switch			

2.2	Switch should have minimum 95 Mpps Forwarding rate for line rate performance of a fully populated switch	
2.3	Switch should support minimum 2GB internal flash and 2GB DRAM.	
3	Layer 2 Switching	
3.1	Switch should support minimum 16000 MAC addresses per system	
3.2	Switch should support Jumbo frames – 9,000 bytes	
3.3	Switch Should support minimum 2000 Active VLAN's and 4000 VLAN ID's	
3.4	Switch Should support Port-based VLAN and MAC-based VLAN	
3.5	Switch Should support 802.1Q VLAN tagging	
3.6	Switch should support IEEE 802.1ad Q-in-Q tunneling	
3.7	Switch Should support Voice VLAN	
3.8	Switch Should support LLDP	
3.9	Switch Should support Voice VLAN LLDP-MED with VoIP integration	
3.10	Switch should support Private Vlans	
3.11	Switch should support 802.1ag - CFM	
3.12	Switch should support G.8032 - ERPS (Ethernet Ring protection switching)	
4	Layer 3 Routing	
4.1	Switch should support IPv4 and IPv6 static routing	
4.2	Switch should support OSPFv1/v2 and Bidirectional Forwarding Detection (BFD) with additional license	
5	Quality of Service (QoS) requirements	
5.1	Switch should support Class-based queuing with prioritization	
5.2	Switch should support Queuing based on VLAN, interface, bundles, or filters	
5.3	Switch should support Marking, policing, and shaping	
5.4	Switch should support WRED and SDWRR	
6	System Management and Administration	
6.1	Should be hardware ready to act as a remote line card of a parent switch and managed as a single entity along with the parent switch	
6.2	Switch should support SNMPv2 and SNMPv3	
6.3	Switch should support IPv6 Management including Neighbor discovery, Logging, Telnet, SSH, Web, SNMP, NTP and DNS	
6.4	Should support 802.1Br - Bridge Port Extension, 802.1AK (MVRP)	
6.5	Should support 2GB DRAM and 2GB Flash with 1.25Ghz CPU capacity	
6.6	Switch should support Configuration synchronization & Configuration rollback	

7	Security features	
7.1	Switch Should support Port, VLAN and Router based Access control lists (ACLs)	
7.2	Should support minimum 1500 Security Access Control Entries	
7.3	Switch should support MAC limiting	
7.4	Switch should support Dynamic ARP Inspection (DAI)	
7.5	Switch should support DHCP snooping	
7.6	Switch should support L2-L4 ACL	
7.7	Switch should support Control plane DoS protection	
7.8	Switch should support IP source guard (both IPv4 and IPv6)	
7.9	Switch should support 802.1x authentication with multiple supplicant mode	
7.10	Switch should support downloadable ACL/ dynamic filters to be applied based on radius information	
7.11	Switch should support Radius initiated Change of Authorization (CoA) for a session with is already authorized and established	
8	Services and Manageability	
8.1	Switch should be managable through CLI, Web Interfce, SSHv2 and HTTP/HTTPs	
8.2	Configuration backup via FTP/secure copy	
8.3	Should support integration with openstack SDN orchestrator	
8.4	Should be capable of working as a remote line card of a parent Ethernet switch and managed as a single logical device along with the parent ethernet switch where the control plane resides on the parent switch.Necessary licenses to activate this features should be available from day 1.	
9	Certifications and compliances	
9.1	Should be ROHS 6 compliant	
9.2	The OEM should be listed in both latest DC networking and wired /wireless magic quadrants of Gartner and should be a leader in wired and wireless/DC networking for the last 2 years.	
9.3	Access core and disttribution should be from the same OEM running same OS type.	
10	Warranty	
10.1	Switch should be provided with hardware replacement warranty and ongoing software upgrades for all major and minor releases for a period of 1 year with 24x7 TAC support from OEM	

<u>Appendix – V(B)</u>

TENDER NO. : AU/GUCC/RUSA 2.0/AIC/ Network Equipment/ Tender/02/2019-20

EQUIPMENT: ACCESSORIES FOR THE STRUCTURING MATERIALS

SI. No.	Item	Brand
1	1.5 PVC Pipe - 3/4"	
2	1.5 PVC Pipe - 1"	
3	1.5 PVC Pipe - 1.5"	
4	PVC Bend - 3/4"	
5	PVC Bend - 1"	
6	PVC Bend - 1.5"	
7	PVCL - 3/4"	
8	PVC L-1"	
9	PVC L - 1.5"	
10	PVC joint Coupler 1.5	
11	2 Way Junction1 "	
12	3 Way Junction1"	
13	4 Way Junction1"	
14	2 Way Junction1.5"	
15	3 Way Junction1.5"	
16	4 Way Junction1.5"	
17	Clamp ¾ "	
18	Clamp 1"	

SPECIFICATION

19	Clamp 1.5"
20	Plug wood (20 pkt Bundle)
21	Star Screw ¾"
22	Star Screw 1"
23	Star Screw 1.5"
24	Steel Nail
25	5 Amp Switch
26	5 Amp Socket
27	15 Amp Switch
28	15 Amp Socket
29	Switch Box 14* 4
30	Switch Box 4*4
31	1.5 Copper Wire
32	Tape Roll
33	Drilling Bit 6 MM
34	Drilling Bit 8 MM
35	Drilling Bit 26 MM
36	Drilling Bit 32 MM
37	Capping Casing 1"
38	Capping Casing 1.5"
39	Capping casing 2 "
40	Slotted Duct
41	Rocket Bolt Net 8 mm

42	Rocket Bolt Net 6mm	
43	½ Flexible House (Steel)	
44	1" Flexible House (Steel)	
45	1.5 " Flexible House (Steel)	
46	¾ " Flexible House (Steel)	
47	4*2 * 3 ft Rectangular Manhole Chamber	

<u>Appendix – V(C)</u>

TENDER NO. : AU/GUCC/RUSA 2.0/AIC/ Network Equipment/ Tender/02/2019-20

EQUIPMENT: DIGGING, LAYING AND TERMINATION OF OFC CABLES WITH HDPE PIPES

SPECIFICATION

SI. No.	Item	Remarks
1.	Digging	Minimum 1 Mtr Depth is required
2.	HDPE Pipes	Protection should be provided at crossings
3.	()FC Cables	Commissioning and termination should be done properly at both ends

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