

**Sayaji Rao Gaekwad Library  
(Central Library)  
BANARAS HINDU UNIVERSITY  
VARANASI-221005**



**TENDER DOCUMENT  
FOR**

**SUPPLY, INSTALLATION ,EXTENSION AND INTEGRATION  
OF NETWORK IN THE CENTRAL LIBRARY- *QUALITY CUM  
COST BASIS***

**PHONE: 0542-2367133 & 2367463**

**FAX: 0542-2367133**

**e-mail: clbhu@bhu.ac.in & clbhu@sify.com**

**TENDER No. L/NW/01/2010-11**

**JULY 2010**

**NETWORKING IN THE CENTRAL LIBRARY, BHU****INDEX**

<b>Sl. No.</b>	<b>Section No.</b>	<b>Description</b>	<b>Page No.</b>
1.	Section I	Instructions to Tenderers	
2.	Section II	Scope of Work and General Requirements	
3.	Section III	Technical Product Specifications	
4.	Annexure I	Existing Switches Available in BHU	
5.	Annexure II	Technical details of required switches and Components	
6.	Annexure III	Library Details	
7.	SCHEDULE – I	QUESTIONNAIRE	
8.	SCHEDULE – II	Schedule of Quantities & Prices for Cable laying and commissioning, etc.	

## SECTION – I

### INSTRUCTION TO TENDERERS

#### 1.1 GENERAL

1.1.1 For and on behalf of the Banaras Hindu University, Varanasi, the undersigned invites tenders for the supply, installation, extension, integration, commissioning and maintenance of the Networking of the Central Library, Banaras Hindu University.

1.1.2 The tender-sets can be obtained from the office of the Professor-in-charge, Central Library, BHU, Varanasi between 1100 hrs. to 1600 hrs., on all working days from July, 26<sup>th</sup> to August, 16<sup>th</sup>, 2010, on payment of Rs. 1000/- (Rupees one thousand only) by bank draft drawn in favour of **The Registrar, B.H.U.**, payable at **Varanasi**. Tender-sets can also be downloaded from our site [www.bhu.ac.in](http://www.bhu.ac.in), but such tenders must accompany a draft of Rs. 1000/- only drawn in favour of **The Registrar, B.H.U.**, payable at **Varanasi**, towards tender document fee ( tenders shall be rejected without this tender document fee).

1.1.3 A photocopy of the receipt obtained must accompany tender sets.

1.1.4 All the documentation should be in English.

#### 1.2 RECEIPT AND OPENING OF TENDERS

1.2.1 Tenders (in triplicate) based on “Three Envelope System” as stated hereunder, each envelope, sealed independently, along with the relevant schedules and appendices duly filled in, will be received upto **1500 hrs of 16<sup>th</sup> August, 2010 in the office of the undersigned and will be opened at 1600 hours on 16<sup>th</sup> August, 2010 in the office of the Professor-in-Charge, BHU, Varanasi. The tenderers or their authorized representatives may be present at the time of the opening of the tenders. The tenderers shall inform in writing the names, the designation, relationship and full address of the authorized representatives in a separate envelop submitted with their tenders.**

## i) SEALED ENVELOPE – 1

This shall contain the requisite earnest money deposit. This envelope shall bear the superscription, **“Part-I Earnest Money Deposit – Tender Serial No. ”**

## ii) SEALED ENVELOPE – II

This shall contain the “Technical Bid” in triplicate covering the relevant technical information, guaranteed technical particulars, past experience, etc.. and other terms and conditions (both commercial as well as technical) as per the tender specification (except prices of the equipment offered). This envelope shall bear the superscription **“Part-II Technical Bid Tender Serial No. ”** Deviations if any, in respect of technical and/or commercial terms of the tender specification, as sought by the tenderers may be submitted along with the “Technical Bid” only. A soft copy of the Technical Bid (**ONLY**) should also be enclosed in the sealed envelop.

## iii) SEALED ENVELOPE –III

This shall contain only “Financial Bid” in triplicate strictly in conformity with the format enclosed in the tender specification vide “Schedule of Quantities and Prices as per Schedule-I & II”. This envelop shall bear the superscription **“Part-III Financial Bid Tender Serial No. ” .**

## iv) SEALED ENVELOPE –IV

This shall contain the non refundable fee. The envelope shall bear the superscription “Part – IV – Processing fee”.

Tenderers are, advised to submit the tenders complete in all respects.

Earnest Money Deposit of such tenderers, whose technical bids are not acceptable to BHU, will be returned to the respective tenderers. **The decision of BHU shall be final and binding in this regard.**

BHU reserves the right to postpone and/or extend the date of receipt or to withdraw the tender notice without assigning any reason thereof. In such event, tenderers shall not be entitled to any compensation in any form whatsoever.

If the last date of receipt of tenders, as aforesaid falls on a holiday, tenders would be received on the next working day at the same time as specified under para No. 1.2.1 above.

1.2.2 Technical clarifications will be sought by B.H.U. from the selected bidders in a **post-bid conference ( if required by BHU)** to be held at 11.00 A.M. on 27<sup>th</sup> August, 2010 in the office of the Professor-in-Charge, Central Library, BHU, Varanasi.

1.2.3. The tenderers whose “Technical Bids” are acceptable to BHU, will be allowed to attend the opening of “Financial bids” scheduled on 30<sup>th</sup> August, 2010, at 11.30 A.M. in the office of the Professor-in-Charge, Central Library, BHU, Varanasi. Only authorized representatives of such bidders will be allowed to attend the opening of the “Financial Bids”.

### **1.3 PREPARATION OF TENDER:**

1.3.1 Tenderers are advised to fill in the *Schedules I, II as appendices* in respect of each and every item by strictly following the instructions provided in the tender-sets in order to facilitate speedy evaluation of tenders. BHU reserves the right to reject tenders not following such instructions.

1.3.2 The tenders should be filled in by the tenderer himself/herself or in the event the tender is filled by his authorized signatory, the name and designation of the authorized signatory should be clearly indicated in the tender.

1.3.3 The tenderers in their own interest are advised to be very careful while writing their rates in “Schedule of Quantities & Prices”. The rates should be written very neatly, preferably typed, and there should be no overwriting or corrections.

1.3.4 In case there are some corrections or over-writing, the same should be signed by the tenderer himself/herself or by the person authorized by the tenderer. The tenderers are further advised to quote the rates both in words as well as in figures.

- 1.3.5 A set of technical, descriptive and illustrative literature/leaflets/brochures/catalogues should accompany the tender in the technical bid wherever applicable giving cross-reference to the item quoted.
- 1.3.6 The work covered by this tender specification shall be carried out strictly in accordance with the conditions specified in this tender document. If any of the aforesaid condition is not clear to a tenderer, clarification may be sought from BHU before submission of tenders. Tenderers are advised to accept all the conditions specified in the tender document to facilitate early finalization of tenders. Should the tenderer, however be unable to comply with any of the conditions of the contract as specified in this tender document, he/she shall clearly mention the proposed departure in the relevant schedule. Separate set of commercial conditions (such as tenderers standard printed conditions) enclosed with the offer and any reference thereto may render the tender liable to summary rejection.

#### **1.4 SUBMISSION OF TENDERS:**

- 1.4.1 All the three sealed envelopes *viz.*, “Part-I: Earnest Money Deposit”, “Part-II: Technical Bid” and “Part-III: Financial Bid” shall be submitted/mailed in single large package/parcel with “**Tender Serial No. “ clearly written on the top, so as to reach the office of the undersigned on or before the time & date specified under para 1.2.1.**
- 1.4.2 Tenders shall preferably be mailed by Registered Post. However, in case the tenders are delivered in person, these should be handed over in the office of the undersigned and due acknowledgment receipts be obtained, failing which BHU will not be responsible for any misplacement/loss of tender.
- 1.4.3 Tenders received either late or after the prescribed due date and time will not be entertained and will be rejected summarily. BHU will not be responsible for any postal delay.
- 1.4.4 Only detailed and complete tenders that are received by due date and time prescribed for receipt of tenders will be considered. Telegraphic/Fax/Incomplete tenders shall be liable to rejection.

## **EARNEST MONEY**

1.5.1 Tenderers shall submit along with the tenders the requisite earnest money as a Bank Guarantee for 10% of the contract value or Rs.20.00 lakhs whichever is less as Security Deposit, for satisfactory execution of the Contract and for defect liability in the form of crossed bank draft drawn only in favour of The **Registrar, B.H.U.**, Payable at Varanasi. This Bank Guarantee shall be kept valid till the completion of work, final commissioning and issue of Final Acceptance Certificate and defect liability period. If the successful Tenderer fails to commence the work within the prescribed time specified in the contract for commencement of work, he/she will lose the Security Deposit which will subsequently be claimed by the university through encashment of the Bank Guarantee furnished by him/her earlier. The University will have full right to invoke the Bank Guarantee if the tenderer commits the breach of the contract.

1.5.2 Tenders received without requisite earnest money shall be rejected.

## **PROCESSING FEE**

1.5.3 Tender processing fee of Rs 20000/- will be charged from each tenderer which is non refundable. A separate draft of Rs 20000/- drawn in favour of registrar, BHU, payable at Varanasi be sent along with tenders.

1.5.4 The tenderers shall not be entitled to revoke, withdraw or alter their offer or any terms and condition thereof, during the period of validity of their offer, without the written consent of BHU. **The tenderer shall forfeit the earnest money deposited along with the tender if the tender is withdrawn within the validity period without the consent of B.H.U..**

1.5.5 In addition to this, the tenderer may at the discretion of BHU be debarred from tendering for a period as may be considered fit by BHU against any tender that might be invited by BHU in the future. BHU will also have within its rights to circulate the information at its discretion to other prospective purchasers about the tenderer having withdrawn his offer within the validity period.

## 1.6 QUALIFICATION OF TENDERERS

1.6.1 The tenderers should enclose/produce satisfactory evidence that they have necessary experience, financial resources and engineering organization to under- take such work to the satisfaction of BHU. If the tenderer fails to do so, his tender shall be rejected. Tenderer should also fulfill the following criteria:

- *System integrators must submit the OEM's authorization certificate for the quoted products for their firm.*
- *Must have at least 2-3 years experience in the field of similar Network installation, commissioning and maintenance.*
- *Must have executed at least 3 projects in large Organizations with at least one project in an University/IIT/IISc having a large campus, in which at least one project consisting of complete and Integrated LAN solution with Fiber Optic Network.*
- *Must have turnover of more than 50 Crores and positive growth curve for the last 2 years. Company balance sheet to be attached for the last two years.*
- *ISO 9001 certification of the vendor/OEM's for these services/ components.*

## 1.7 MODIFICATIONS PRIOR TO THE DATE OF TENDER OPENING:

BHU may revise or amend the specifications and other conditions prior to the date notified for receiving the tenders. Such revisions and amendments, if any will be communicated to all the prospective tenderers. In such a case, if considered necessary, the last date and time of receiving and opening of the tenders may also be extended at the discretion of BHU.

## 1.8 DELIVERY OF EQUIPMENT AND COMPLETION OF WORK

The tenderer should enclose with his/her tender a detailed activity (PERT) chart for the pieces of work covered in this specification starting from the date of letter of intent. The target completion date should be **Three** months from the date of issuance of the letter of intent.



## **1.9 VALIDITY:**

The tenders should remain valid for a period of at least four calendar months, from the date of opening of the tenders.

## **1.10 AWARD OF CONTRACT**

1.10.1 BHU shall not be bound to accept the lowest or any tender and reserves the right of accepting the whole or a portion of any of the tenders or reject any tender as it may deem fit without assigning any reason thereof.

1.10.2 BHU reserves the right to take over part or full work from the contractor after the award of work or during the execution of work.

1.10.3 Canvassing in any form by the tenderer to influence the consideration of his/her tender shall render the tenderer liable to summary rejection.

**1.11** Tender documents are not transferable. The cost of the tender fee is neither refundable nor adjustable for other tenders.

**1.12** Each page of the tender document should be signed in ink and submitted by the tenderer, in token of his/her having studied and understood the tender carefully

**1.13** The sealed tenders should be sent to:

**Professor-in-Charge**

**Central Library,**

**Banaras Hindu University.**

**Varanasi-221005, UP.**

**Phone : 0542 – 2367133 & 2367463**

**Fax : 0542 – 2367133**

**E-mail : [clbhu@bhu.ac.in](mailto:clbhu@bhu.ac.in) & [clbhu@sify.com](mailto:clbhu@sify.com)**

## **SECTION – II**

### **SCOPE OF WORK AND GENERAL REQUIREMENTS**

#### **2.1 DEFINITION OF TERMS**

2.1.1 **BHU** shall mean **Banaras Hindu University** and shall include its legal representatives, successors and assigns.

2.1.2 ‘**VENDOR**’ shall mean successful bidder whose bid has been accepted in writing by BHU for the award of the work for the installation of “**SUPPLY, INSTALLATION ,EXTENSION AND INTEGRATION OF NETWORK IN THE CENTRAL LIBRARY– QUALITY CUM COST BASIS**” in *Central Library,BHU* premises and shall include its legal representative(s), successor(s), permitted assign(s) and technical personnel deputed to perform the work under work order.

#### **2.2 SCOPE OF THE WORK**

Installation of **NETWORKING** at Central Library, BHU should comprise of the following:

- (I) Supply, laying, installation, testing, commissioning of Fiber Optic cables as per the layout submitted by the vendor and duly approved by BHU.
- (II) Supply, installation, testing and commissioning of UTP networking products, Switches/Hubs and associated hardware/ software.
- (III) The tenderer should arrange for relevant training to BHU’s staff to configure the switches using the proprietary IOS of the switches.

- (IV) Supply, Installation, Testing and Commissioning of Network Management software with manuals/documentation.
- (V) Testing, Commissioning, Integration and Certification of the total network System.
- (VI) *The tenderer must be able to integrate existing Cisco switches available in BHU, as per details given in Annexure I. Any additional module required for its effective use may also be indicated, procured and installed.*
- (VII) Maintenance support for the entire Network System (including supply/replacements of spares) during the warranty period and, also during post warranty period (if desired by BHU).

Bidder has to quote for total scope of supply and other works. Bidders offering incomplete scope of supply and other works are liable to be rejected.

### **2.3 GENERAL REQUIREMENTS:**

- 2.3.1 This specification covers the supply, F.O.R delivery at site, installation, testing and commissioning of cables, conduits, network products. Active components, software, etc. (Collectively referred as 'EQUIPMENT') and making them fully operational for the intended use.
- 2.3.2 The design of Central Library Networking should allow for upgradation of technology, addition of new servers/ workstations/ clients/switches/hubs and extension of networking in the future.
- 2.3.3 All the equipment/accessories will be warranted and must operate at or above the guaranteed values with regard to availability.
- 2.3.4 The equipment proposed to be supplied by the bidders shall be industry proven products and not the R&D models unless specified in the technical specifications. All supplies including cables, networking products, hardware and software shall conform to the requirements of relevant Indian and International standard.

- 2.3.5 Part/Model no., etc. as used by the manufacturer shall be indicated along with the technical offer.
- 2.3.6 Technical literature of the components offered and as published by the original manufacturer of the component, shall be submitted along with the offer giving cross-reference of details in the technical bid.
- 2.3.7 A copy of 15 years or more site certificate shall be submitted along with the offer. The certification will require certain parameters / characteristics of the network to be put under test. A list of all such parameters to be tested along with the permissible value of it shall be provided along with the offer.
- 2.3.8 Quantities of cables, PVC conduits, GI conduits as indicated in the schedule of prices are estimated and the actual quantities may vary on either side.
- 2.3.9 **The vendor immediately after the award of the work shall prepare a detailed network plan giving cable route proposed to be followed for laying the cables and placement of the equipment, etc. The vendor shall also calculate the length of cable, conduit based on the cable route and shall obtain approval from BHU for these quantities before supplying these items.**
- 2.3.10 The vendor shall provide all the required equipment and services whether explicitly mentioned in these specifications or not to fulfill the intent of the specifications and to ensure the completeness, operability and maintainability of the network and devices at no extra cost to BHU.
- 2.3.11 All the equipments, accessories and cables supplied under this contract shall be in accordance with the latest applicable recommendations, regulations and standards. The bidder shall furnish a complete list of all the **standards and codes** under which his/her offered equipment and products are designed, manufactured and assembled along with his/her bid.
- 2.3.12 The cables are to be of reputed brands in case of Fiber Optic Cable as well as UTP cables.

2.3.13 The ports and parts of the Switches must be of the same brand and manufacturer as to be properly integrated for the network extension. The Access level switches must be of reputed brands and of similar connectivity and communication capabilities.

**2.3.14 SAFETY MEASURE:**

All the safety measures should be taken for the protection of cables and devices from lightening and other such sources.

**2.4 SITE PREPARATION, SUPERVISION AND INSTALLATION:**

- 2.4.1. The vendor shall be fully responsible for installation and commissioning of the equipment and cabling and other related activities such as unpacking, uncrating, inspection, etc. for which BHU shall provide the required space at its premises. The vendor shall have to arrange by himself/herself all the testing equipment and tools required for maintenance and make his/her own transport arrangements.
- 2.4.2. Installation of the equipment shall be done by the vendor at the exact locations (intimated by BHU).The vendor shall arrange material/manpower required for such installation at his/her cost.
- 2.4.3. Cost of material/accessories required for the installation of I/O units, cable, conduits, channels, racks, mounting etc. (like clamps, clamping screws, nails etc.) shall be included in the units bid price of wall mounts, cables, conduits, channels, etc.
- 2.4.4. Selected vendor shall carry out complete installation through competent/trained supervisor and workmen. All the materials shall be handled and installed taking due care to avoid any damage to BHU property and its personnel. Any damage shall be made good without any cost to BHU.

**2.5 GUARANTEED PERFORMANCE:**

The vendor shall guarantee that equipment to be supplied under these specifications shall work for its intended use. The vendor shall also guarantee that in case the equipment supplied under the contract fails to

provide its intended use, the equipment will be replaced by the vendor without any financial liability on the part of BHU.

## **2.6 INSPECTION, TESTING AND COMMISSIONING:**

2.6.1 Predispatch inspection will be done by the Library personnel to check the equipment to be supplied to BHU Library.

2.6.2 On completion of supply of the equipment under this contract, each item of the equipment shall be thoroughly inspected jointly by BHU and the vendor.

2.6.3 On completion of installation, the networking system, hardware and software items shall be thoroughly inspected jointly by BHU and the vendor for its completeness and correctness at the site of installation for the start of the acceptance test.

**2.6.4 All the computers, servers along with printers and peripherals in Central Library will be tested in the library to confirm the integrated operation of all the items to the desired level of performance.**

2.6.5 Configuration of the network should be done so as to establish connectivity between every pair of nodes.

2.6.6 Hardware/software will be tested for a minimum of 7 days for checking the various features of the software/hardware before BHU issues the certificate of successful commissioning. After BHU has issued, in writing, the commissioning certificate, the computer network systems shall be handed over to Central Library, BHU.

## **2.7 TAKING OVER:**

The network with the devices shall be taken over by Central Library, BHU from the vendor after the successful completion of site test and commissioning as per technical specification.

## **2.8 DOCUMENTATION:**

Two sets of technical literature of the components offered and as published by the original manufacturer of the component shall be submitted along with the offer. The documentation in original shall include the necessary operating and technical manuals for all the H/W system/sub systems and software. The extent of the documentation to furnish shall be to the satisfaction of BHU.

## **2.9 TRAINING:**

Vendor shall conduct formal training to minimum 10 BHU Library personnel (in-house) and minimum 4 administrative and System personnel (with local hospitality at their end) on the requisite hardware and software for operation and maintenance of the system. Vendor shall provide adequate lecture notes, handouts and other relevant training documents. The venue, duration, course content and the dates of training (in-house) etc. will be decided in mutual consent by the bidder and BHU.

## **2.10 WARRANTY AND CERTIFICATION**

2.10.1 Vendor shall provide 3 years of operational and maintenance service of the network at their own cost.

2.10.2 Vendor shall provide warranty for trouble free operation of the network and devices for a minimum period of one year and individual components as specified after commissioning and successful testing and taking over. During this period, it will be the responsibility of the vendor to maintain and support the system fully. It is also the responsibility of the vendor to ensure availability of the network and devices and also addition, deletion and relocation of nodes in the network, provision of all supplies, spares and services necessary for the maintenance during warranty period.

Following aspects should be covered through warranty:

- At least 3 year comprehensive warranty on the active components of network (switches/hubs etc.)

- Testing and replacement of any or all the parts of the cable in case of fault.

2.10.3 The vendor shall provide periodic preventive maintenance during the warranty including periodic inspection. The preventive maintenance schedule recommendation should be furnished along with the offers. During warranty, the vendor shall provide preventive maintenance in consultation with BHU.

2.10.4 Vendor shall provide industry standard certification for the cabling system as suggested in the technical specification.

2.10.4. (a) Vendor shall mention in his/her bid, the charges to be levied on BHU for 3 years AMC contract along with its terms and scope of work, after the expiry of Warranty period, if desired by BHU.

**2.10.5. Vendor should provide manufacturer's letter for providing full support for repairs/replacement of switches/devices for at least five years after the warranty period and Service level agreement with OEM during warranty and AMC.**

#### **2.11a COMPLETION OF WORK:**

The networking work shall be installed and commissioned in full at the site within **three months** from the date of issue of the letter of award. The time of four months is essence of the contract.

**2.11b PENALTY: In case there is a delay in commissioning and handing over of the networking and breach of any of the conditions of the warranty clause by the vendor, liquidated damages of Rs. 25,000 ( Rs. Twenty five thousands only) for each week's or part of week's delay upto first four weeks and thereafter Rs.1.00 Lakhs per week or part of the week's delay subject to maximum 10% of tender value will be deducted from the final bill of the tenderer.**

#### **2.12 COMPLETENESS OF OFFER**

*In case any item is not given in the technical specification of this tender, but which is required essentially for commissioning of the project, it*



*should be included in the offer so as to make the offer complete in all respects. No claim for extra payment shall be entertained on the plea that the equipment specification was not complete in all respects.*

## **2.13 DEFECT LIABILITY**

The defect liability period of the work under this contract shall be 12 months from the date of issue of the final acceptance certificate.

## **2.14 ASSIGNMENT AND SUB-CONTRACT**

The tenderer shall not assign or sublet the whole or any portion of the contract or allow any person to become interested therein in any manner whatsoever without prior written approval of BHU. Provided always that the provision of labour on a piece of work basis shall not be deemed to be a sub-letting under this clause. The permitted assignment/sub-contracting of work by the contractor shall not establish any contractual relationship between the sub-contractor and BHU and shall not relieve the contractor from any liability or obligations under the contract and tenderer shall be responsible for the acts, default and neglects of any sub-contractor.

## **2.15 FORCE MAJEURE**

2.15.1 Neither the university nor the tenderer shall be liable to the other for any delay in or failure of, their respective obligations under this agreement caused by occurrence beyond the control of the University or the tenderer because of fire, floods, power, acts of God, lockout, sabotage, any law, statute or ordinance, order, actions or regulations of the Governments or any agency thereof, or any compliance therewith or any other causes, contingencies or circumstances similar to the above. Either party shall promptly, but not later than 30 days, thereafter notify the other to the commencement and cessation of such contingency and proof that such is beyond the control and affects the implementation of this agreement adversely and mutually. If such contingency continues beyond six months, both parties agree to discuss and agree upon an equitable solution for the termination of this agreement or otherwise decide the course of action to be adopted.

2.15.2. The respective obligation of the parties shall be extended for the period of Force Majeure provided notices as required above are given in time and the contingency established if so required by the other party.

## **2.16 JURISDICTION**

All questions, disputes and differences arising under and out of, or in connection with the tender/contract, if concluded, shall be referred to the sole arbitration by an arbitrator appointed under the provisions of the Arbitration and Conciliation Act, 1996 by the Vice-Chancellor, B.H.U., Varanasi.

## **2.17 TAXES**

- (a) **INCOME TAX:** Income Tax on gross amount billed will be deducted from the contractor's bills as per Section 194 (c) of Income Tax act.
- (b) **SERVICE TAX :** Service Tax is payable, if applicable.
- (c) **ENTRY TAX :** Entry tax, if applicable, would be paid by the tenderer.

## **2.18 TERMS OF PAYMENT**

50% Payment shall, after supply and installation of the equipment and 50% after two months of satisfactory installation of the network, be paid.

## **2.19 SPARE PARTS**

Tenderer should also include, in their tender, provision for spare parts/tools to be supplied with the order for proper maintenance and operation of the network for the specified warranty period and thereafter AMC period, if entered into.

## **2.20 APPLICATION TOOLS:**

The tenderer must also supply the network monitoring tools (please mention along with its brochures) for day to day application without any additional cost to B.H.U.

## **2.21 VALIDITY OF PRICES**

The rates as quoted for the Access Switch and FO/UTP cable and cable-laying charges given under Section III, should be valid for at least six months from the date of issue of the Letter of Intent.

## SECTION III

### 3. TECHNICAL PRODUCTS SPECIFICATIONS

The present tender requirement is to enhance the connectivity in the Central Library building through the existing CISCO Distribution switches. **The detail requirement of active, passive and other components are given in annexure II of this tender document.** The tenderer is advised to check for the requirements of all these items and quote accordingly for the completion of the project.

#### 3.1 WARRANTY

##### MANUFACTURER WARRANTY

Contractor shall provide a 15 years or more Extended Product Warranty and System Assurance Warranty for this cabling system.

#### 3.2 LAYOUT PLAN

The contractor/tenderer would provide the final Cabling **route map** at the time of handing over the same to the University.

## ANNEXURE I

### Existing Switches Available in BHU

<b>Core SWITCH at Computer Center, BHU ( Cisco 6513 )</b>			
S.N.	Product Part Nos.	Description	Quantity
1	WS-C6513	Cat 6513 Chassis, 13slot, 19RU, No Power Supply, No Fan Tray	1
2	S733Z-12217SXB	Cisco CAT6000-SUP720 IOS IP	1
3	WS-SUP720	Catalyst 6500 / Cisco 7600 Supervisor 720 Fabric MSFC3 PFC3A	1
4	WS-SUP720	Catalyst 6500 / Cisco 7600 Supervisor 720 Fabric MSFC3 PFC3A	1
5	WS-X 6724-SFP	Catalyst 6500 24-port GigE Mod: fabric-enabled (Req. SFPs)	1
6	GLC-LH-SM	GE SFP, LC connector LX/LH transceiver	7
7	GLC-SX-MM	GE SFP, LC connector SX transceiver	10
8	WS-X6148-GE-TX	Catalyst 6500 48-port 10/100/1000 GE Mod., RJ-45	1
9	WS-X6704-10GE	Cat6500 4-port 10 Gigabit Ethernet Module (req. XENPAKs)	1
10	WS-F6700-DFC3A	Catalyst 6500 Dist Fwd Card for WS-X67xx modules	1
11	XENPAK-10GB-LR	10GBASE-LR XENPAK Module	4
12	WS-X6704-10GE	Cat6500 4-port 10 Gigabit Ethernet Module (req.XENPAKs)	1
13	WS-F6700-DFC3A	Catalyst 6500 Dist Fwd Card for WS-X67xx modules	1
14	XENPAK-10GB-LR	10GBASE-LR XENPAK Module	1
15	WS-C6K-13SLT-FAN2	High Speed Fan Tray for Catalyst 6513 / Cisco 7613	1
16	WS-CAC-3000W	Catalyst 6500 3000W AC power supply	2
17	CAB-AC-2500W-INT	Power Cord, 250Vac 16A, INTL	2
18	MEM-S2-512MB	Catalyst 6500 512MB DRAM on the Supervisor (SUP2 or SUP720)	1
19	MEM-MSFC2-512MB	Catalyst 6500 512MB DRAM on the MSFC2 or SUP720 MSFC3	1
20	MEM-S2-512MB	Catalyst 6500 512MB DRAM on the Supervisor (SUP2 or SUP720)	1
21	MEM-MSFC2-512MB	Catalyst 6500 512MB DRAM on the MSFC2 or SUP720 MSFC3	1
22	MEM-XCEF720-256M	Catalyst 6500 256MB DDR, xCEF720 (67xx interface, DFC3A)	1
23	WS-F6700-CFC	Catalyst 6500 Central FWD Card for WS-X67xx	1
24	MEM-XCEF720-256M	Catalyst 6500 256MB DDR, xCEF720 (67xx interface, DFC3A)	1
25	MEM-XCEF720-256M	Catalyst 6500 256MB DDR, xCEF720 (67xx interface, DFC3A)	1
26	WS-F6K-XENPAKBLNKCVR	Catalyst 6500 Xenpak Blank Covers for 6802/6704 -10GE	3

<b>Switch at Academic Staff College (Cisco 6509)</b>			
1	WS-C6509	Cat 6509 Chassis, 9slot, 15RU, No Power Supply, No Fan Tray	1
2	S733Z-12217SXB	Cisco CAT6000-SUP720 IOS IP	1
3	WS-X6K-S720-6408A	Cat6500 SUP720 and WS-X6408-GBIC	1
4	WS-X6K-S720-6408A	Cat6500 SUP720 and WS-X6408-GBIC	1
5	WS-X6704-10GE	Cat6500 4-port 10 Gigabit Ethernet Module (req. XENPAKs)	1
6	XENPAK-10GB-LR	10GBASE-LR XENPAK Module	2
7	WS-G5484	1000BASE-SX Short Wavelength GBIC (Multimode only)	11
8	WS-C6K-9SLOT-FAN2	Catalyst 6509 High Speed Fan Tray	1
9	WS-CAC-3000W	Catalyst 6500 3000W AC power supply	2
10	CAB-AC-2500W-INT	Power Cord, 250Vac 16A, INTL	2
11	WS-SUP720	Catalyst 6500 / Cisco 7600 Supervisor 720 Fabric MSFC3 PFC3A	1
12	MEM-S2-512MB	Catalyst 6500 512MB DRAM on the Supervisor (SUP2 or SUP720)	1
13	MEM-MSFC2-512MB	Catalyst 6500 512MB DRAM on the MSFC2 or SUP720 MSFC3	1
14	WS-X6408A-GBIC	Catalyst 6000 8-port GE, Enhanced QoS (Req. GBICs)	1
15	WS-SUP720	Catalyst 6500 / Cisco 7600 Supervisor 720 Fabric MSFC3 PFC3A	1
16	MEM-S2-512MB	Catalyst 6500 512MB DRAM on the Supervisor (SUP2 or SUP720)	1
17	MEM-MSFC2-512MB	Catalyst 6500 512MB DRAM on the MSFC2 or SUP720 MSFC3	1
18	WS-X6408A-GBIC	Catalyst 6000 8-port GE, Enhanced QoS (Req. GBICs)	1
19	MEM-XCEF720-256M	Catalyst 6500 256MB DDR, xCEF720 (67xx interface, DFC3A)	1
20	WS-F6K-XENBLNKCVR	Catalyst 6500 Xenpak Blank Covers for 6802/6704-10GE	2
21	WS-F6700-CFC	Catalyst 6500 Central FWD Card for WS-X67xx	1

## ANNEXURE - II

### Technical Details of the Required Switches and Components

Product	Description	Unit Quantity
<b>Core Switch</b>		
VS-C6509E-S720-10G	Catalyst Chassis+Fan Tray+Sup720-10G; IP Base ONLY incl. VSS	1
SV33ISK9C-12233SXI	Cisco CAT6000-VSS720 IOS IP SERVICES SSH - DEFAULT	1
CF-ADAPTER-SP	SP adapter for SUP720 and SUP720-10G	1
X2-10GB-SR	10GBASE-SR X2 Module	1
VS-S720-10G-3C	Cat 6500 Supervisor 720 with 2 ports 10GbE and MSFC3 PFC3C	1
CF-ADAPTER-SP	SP adapter for SUP720 and SUP720-10G	1
X2-10GB-SR	10GBASE-SR X2 Module	1
WS-X6724-SFP	Catalyst 6500 24-port GigE Mod: fabric-enabled (Req. SFPs)	1
GLC-SX-MM	GE SFP, LC connector SX transceiver	1
WS-X6748-GE-TX	Cat6500 48-port 10/100/1000 GE Mod: fabric enabled, RJ-45	1
WS-X6748-GE-TX	Cat6500 48-port 10/100/1000 GE Mod: fabric enabled, RJ-45	1
WS-CAC-3000W	Catalyst 6500 3000W AC power supply	1
CAB-AC-2500W-INT	Power Cord, 250Vac 16A, INTL	1
CONNECTOR-KIT	Connector Kit	1
VS-S720-10G-3C	Cat 6500 Supervisor 720 with 2 ports 10GbE and MSFC3 PFC3C	1
VS-F6K-MSFC3	Catalyst 6500 Multilayer Switch Feature Card (MSFC) III	1
VS-F6K-PFC3C	Catalyst 6500 Sup 720-10G Policy Feature Card 3C	1
VS-S720-10G	Catalyst 6500 Supervisor 720 with 2 10GbE ports	1
MEM-C6K-CPTFL1GB	Catalyst 6500 Compact Flash Memory 1GB	1
BF-S720-64MB-RP	Bootflash for SUP720-64MB-RP	1
VS-F6K-MSFC3	Catalyst 6500 Multilayer Switch Feature Card (MSFC) III	1
VS-F6K-PFC3C	Catalyst 6500 Sup 720-10G Policy Feature Card 3C	1
VS-S720-10G	Catalyst 6500 Supervisor 720 with 2 10GbE ports	1
MEM-C6K-CPTFL1GB	Catalyst 6500 Compact Flash Memory 1GB	1
BF-S720-64MB-RP	Bootflash for SUP720-64MB-RP	1
MEM-XCEF720-256M	Catalyst 6500 256MB DDR, xCEF720 (67xx interface, DFC3A)	1
WS-F6700-CFC	Catalyst 6500 Central Fwd Card for WS-X67xx modules	1
MEM-XCEF720-256M	Catalyst 6500 256MB DDR, xCEF720 (67xx interface, DFC3A)	1
WS-F6700-CFC	Catalyst 6500 Central Fwd Card for WS-X67xx modules	1
MEM-XCEF720-256M	Catalyst 6500 256MB DDR, xCEF720 (67xx interface, DFC3A)	1
WS-F6700-CFC	Catalyst 6500 Central Fwd Card for WS-X67xx modules	1

WS-F6K-XENBLNKCVR	Catalyst 6500 Xenpak Blank Covers for WS-X6704-10GE	1
MEM-XCEF720-256M	Catalyst 6500 256MB DDR, xCEF720 (67xx interface, DFC3A)	1
WS-F6700-CFC	Catalyst 6500 Central Fwd Card for WS-X67xx modules	1
WS-C6509-E-FAN	Catalyst 6509-E Chassis Fan Tray	1
<b>Server Farm</b>		
WS-C3560E-24TD-S	Catalyst 3560E 24 10/100/1000+2*10GE(X2),265W,IPB s/w	1
S356EVT-12252SE	CAT 3560E IOS UNIVERSAL W/O CRYPTO WITH WEB BASED DEV MGR	1
CAB-IND-10A	10A Power cable for India	1
X2-10GB-SR=	10GBASE-SR X2 Module	1
<b>Edge Switch</b>		
<b>Access Switch 24-port (uplink SFP)</b>		
WS-C2960-24TC-L	Catalyst 2960 24 10/100 + 2T/SFP LAN Base Image	1
CAB-IND-10A	10A Power cable for India	1
GLC-SX-MM=	GE SFP, LC connector SX transceiver	1
<b>Access Switch 48-port (uplink SFP)</b>		
WS-C2960-48TC-L	Catalyst 2960 48 10/100 + 2 T/SFP LAN Base Image	1
CAB-IND-10A	10A Power cable for India	1
GLC-SX-MM=	GE SFP, LC connector SX transceiver	1
<b>Access Switch 48-port (non-SFP)</b>		
WS-C2960-48TT-L	Catalyst 2960 48 10/100 + 2 1000BT LAN Base Image	1
CAB-IND-10A	10A Power cable for India	1
<b>Cisco WLAN Controller</b>		
AIR-WLC2125-K9	2100 Series WLAN Controller for up to 25 Lightweight APs	1
CAB-AC-C5-UK	AC Power Cord, Type C5, UK	1
SWLC2100K9-60	Cisco Unified WLAN Controller SW Release 6.0 - MD	1
ASA5505-PWR-AC	ASA 5505 AC Power Supply Adapter	1
SSC-BLANK	ASA 5505 SSC Blank Slot Cover	1
SWLC2100K9-60-ER	WLAN Controller Emergency SW for WLC2106 - ED	1
AIR-LAP1242AG-N-K9	802.11ag LWAPP AP Dual 2.4,5GHz RP-TNC Non-FCC Cnfg	1



AIR-PWR-CORD-AP	AIR Line Cord Asia Pacific (APAC)	1
AIR-PWR-B	Power Sply:100-240 VAC,Out:48VDC,380 mA:1130,1140,1240,1300	1
AIR-CONCAB1200	Console Cable for 1130, 1200, 1230, 1240, 521, 1250	1
AIRLAP-FIPSKIT	FIPS Kit for LWAPP APs	1
S124RK9W-12421JA	Cisco 1240 Series IOS WIRELESS LAN LWAPP RECOVERY	1
AIR-ANT4941	2.4 GHz,2.2 dBi Dipole Antenna Black w/RP-TNC Connect.Qty. 1	1
AIR-LAP1310G-A-K9	802.11g LWAPP AP Int. Antenna FCC Cnfg	1
AIR-PWR-CORD-AP	AIR Line Cord Asia Pacific (APAC)	1
S131RK9W-12311JX	Cisco 1310 Series IOS WIRELESS LAN LWAPP RECOVERY	1
<b>In case 10 Gbps ports are not available in Academic Staff College</b>		
<b>Switch module &amp; ports</b>		
WS-X6704-10GE=	Cat6500 4-port 10 Gigabit Ethernet Module (req. XENPAKs)	1
XENPAK-10GB-SR	10GBASE-SR XENPAK Module	1
<b>Products for ADDITIONAL SECURITY</b>		
<b>Cisco Security Agents</b>		
CSA-STAR-6.0.1-K9=	CSA 6.0.1 Starter Bundle SKU	1
CSA-B500-DTOP-K9	Cisco Security Agent [500 Desktop Agent Bundle]	1
<b>Server Hardware</b>	<b>Compatible Server to be procured by BHU</b>	
<b>Cisco Network Admission Control</b>		
<b>Manager</b>		
NACMGR-LTEFB-K9	NAC Appliance 3315 Manager Failover Bundle -max 3 Servers	1
CAB-ACU	AC Power Cord (UK), C13, BS 1363, 2.5m	2
NAC-MGR-47-K9	NAC Appliance Manager Release 4.7	2
NAC3315	NAC Appliance 3315 Manager Hardware	2
<b>Server</b>		
<b>Wired LAN</b>		

NAC3315-500FB-K9	NAC Appliance 3315 Server Failover Bundle -max 500 users	1
CAB-ACU	AC Power Cord (UK), C13, BS 1363, 2.5m	2
NAC-SVR-47-K9	NAC Appliance Server Release 4.7	2
NAC3315-SVR	NAC Appliance 3315 Server Hardware	2
<b>Wireless LAN</b>		
NAC3315-100FB-K9	NAC Appliance 3315 Server Failover Bundle -max 100 users	1
CAB-ACU	AC Power Cord (UK), C13, BS 1363, 2.5m	2
NAC-SVR-47-K9	NAC Appliance Server Release 4.7	2
NAC3315-SVR	NAC Appliance 3315 Server Hardware	2
<b>Firewall for Server Farm</b>		
ASA5520-BUN-K9	ASA 5520 Appliance with SW, HA, 4GE+1FE, 3DES/AES	1
CAB-ACU	AC Power Cord (UK), C13, BS 1363, 2.5m	1
SF-ASA-7.2-K8	ASA 5500 Series Software v7.2	1
ASA-VPN-CLNT-K9	Cisco VPN Client Software (Windows, Solaris, Linux, Mac)	1
ASA5520-VPN-PL	ASA 5520 VPN Plus 750 IPsec User License (7.0 Only)	1
ASA5500-ENCR-K9	ASA 5500 Strong Encryption License (3DES/AES)	1
SSM-BLANK	ASA/IPS SSM Slot Cover	1
ASA-180W-PWR-AC	ASA 180W AC Power Supply	1
<b>Cisco Secure Access Control Server ( AAA)</b>		
CSACS-1120-K9	ACS 1120 Appliance.Supports ACS 4.2 and ACS 5.0 SW	1
CAB-ACSA	AC Power Cord (India/South Africa), C13, BS 546, 1.8m	1
CSACS-5-BASE-LIC	Cisco Secure ACS 5 Base License	1
CSACS-5.0-SW-K9	Config Option: ACS 5.0 software loaded on 1120	1
<b>Dedicated IPS Device</b>		
GX5008-C-V2	Proventia Network IPS GX5008-C (Fail Closed, 8 TX-Copper Protected Ports)	1
ABYP-4T-0S-0L-P	External Power Failure Bypass Unit (4 TX-Copper Segments)	1
PROVENTIA-G-MAINT	Tech Support, Advanced Exchange, and Updates for Proventia GX5008-C	1
ABYP-4T-0S-0L-M	Technical Support and Maintenance for ABYP-4T-0S-0L-P	1
SP-BRZ-P	Site Protector Bronze	1
SP-BRZ-M	SiteProtector Bronze Technical Support and Updates	1

**DETAILS OF ANNEXURE - II**

Product	Description	Order Qty	Description
<b>Core Switch</b>			
VS-C6509E-S720-10G	Catalyst Chassis+Fan Tray+Sup720-10G; IP Base ONLY incl. VSS	1	
SV33ISK9C-12233SXI	Cisco CAT6000-VSS720 IOS IP SERVICES SSH - DEFAULT	1	
CF-ADAPTER-SP	SP adapter for SUP720 and SUP720-10G	1	
X2-10GB-SR=	10GBASE-SR X2 Module	2	For connectivity with Serv farm switch
VS-S720-10G-3C	Cat 6500 Supervisor 720 with 2 ports 10GbE and MSFC3 PFC3C	1	For connectivity with Administraive Bld Switch
CF-ADAPTER-SP	SP adapter for SUP720 and SUP720-10G	1	
X2-10GB-LR	10GBASE-LR X2 Module	2	
WS-X6724-SFP	Catalyst 6500 24-port GigE Mod: fabric-enabled (Req. SFPs)	1	
GLC-SX-MM	GE SFP, LC connector SX transceiver	14	
WS-X6748-GE-TX	Cat6500 48-port 10/100/1000 GE Mod: fabric enabled, RJ-45	1	
WS-X6748-GE-TX	Cat6500 48-port 10/100/1000 GE Mod: fabric enabled, RJ-45	1	
WS-CAC-3000W	Catalyst 6500 3000W AC power supply	2	
CAB-AC-2500W-INT	Power Cord, 250Vac 16A, INTL	1	
CONNECTOR-KIT	Connector Kit	1	
VS-S720-10G-3C	Cat 6500 Supervisor 720 with 2 ports 10GbE and MSFC3 PFC3C	1	
VS-F6K-MSFC3	Catalyst 6500 Multilayer Switch Feature Card (MSFC) III	1	
VS-F6K-PFC3C	Catalyst 6500 Sup 720-10G Policy Feature Card 3C	1	
VS-S720-10G	Catalyst 6500 Supervisor 720 with 2 10GbE ports	1	
MEM-C6K-CPTFL1GB	Catalyst 6500 Compact Flash Memory 1GB	1	
BF-S720-64MB-RP	Bootflash for SUP720-64MB-RP	1	
VS-F6K-MSFC3	Catalyst 6500 Multilayer Switch Feature Card (MSFC) III	1	
VS-F6K-PFC3C	Catalyst 6500 Sup 720-10G Policy Feature Card 3C	1	
VS-S720-10G	Catalyst 6500 Supervisor 720 with 2 10GbE ports	1	
MEM-C6K-CPTFL1GB	Catalyst 6500 Compact Flash Memory 1GB	1	
BF-S720-64MB-RP	Bootflash for SUP720-64MB-RP	1	
MEM-XCEF720-256M	Catalyst 6500 256MB DDR, xCEF720 (67xx interface, DFC3A)	1	
WS-F6700-CFC	Catalyst 6500 Central Fwd Card for WS-X67xx modules	1	

MEM-XCEF720-256M	Catalyst 6500 256MB DDR, xCEF720 (67xx interface, DFC3A)	1	
WS-F6700-CFC	Catalyst 6500 Central Fwd Card for WS-X67xx modules	1	
MEM-XCEF720-256M	Catalyst 6500 256MB DDR, xCEF720 (67xx interface, DFC3A)	1	
WS-F6700-CFC	Catalyst 6500 Central Fwd Card for WS-X67xx modules	1	
WS-F6K-XENBLNKCVR	Catalyst 6500 Xenpak Blank Covers for WS-X6704-10GE	3	
MEM-XCEF720-256M	Catalyst 6500 256MB DDR, xCEF720 (67xx interface, DFC3A)	1	
WS-F6700-CFC	Catalyst 6500 Central Fwd Card for WS-X67xx modules	1	
WS-C6509-E-FAN	Catalyst 6509-E Chassis Fan Tray	1	
<b>Server Farm</b>			
WS-C3560E-24TD-S	Catalyst 3560E 24 10/100/1000+2*10GE(X2), 265W,IPB s/w	2	
S356EVT-12252SE	CAT 3560E IOS UNIVERSAL W/O CRYPTO WITH WEB BASED DEV MGR	2	
CAB-IND-10A	10A Power cable for India	2	
X2-10GB-SR=	10GBASE-SR X2 Module	4	For inter-connectivity and connectivity with Core switch
<b>Edge Switch 10/100Mbps</b>			
<b>Access Switch 24-port (uplink SFP)</b>			
WS-C2960-24TC-L	Catalyst 2960 24 10/100 + 2T/SFP LAN Base Image	1	Access Port speed 10/100 Mbps
CAB-IND-10A	10A Power cable for India	1	
GLC-SX-MM=	GE SFP, LC connector SX transceiver	2	
<b>Access Switch 48-port (uplink SFP)</b>			
WS-C2960-48TC-L	Catalyst 2960 48 10/100 + 2 T/SFP LAN Base Image	6	Access Port speed 10/100 Mbps
CAB-IND-10A	10A Power cable for India	6	
GLC-SX-MM=	GE SFP, LC connector SX transceiver	12	
<b>Access Switch 48-port (non-SFP)</b>			
WS-C2960-48TT-L	Catalyst 2960 48 10/100 + 2 1000BT LAN Base Image	3	Access Port speed 10/100 Mbps

CAB-IND-10A	10A Power cable for India	3	
<b>Cisco WLAN Controller</b>			
AIR-WLC2125-K9	2100 Series WLAN Controller for up to 25 Lightweight APs	2	
CAB-AC-C5-UK	AC Power Cord, Type C5, UK	2	
SWLC2100K9-60	Cisco Unified WLAN Controller SW Release 6.0 - MD	2	
ASA5505-PWR-AC	ASA 5505 AC Power Supply Adapter	2	
SSC-BLANK	ASA 5505 SSC Blank Slot Cover	2	
SWLC2100K9-60-ER	WLAN Controller Emergency SW for WLC2106 - ED	2	
AIR-LAP1310G-A-K9	802.11g LWAPP AP Int. Antenna FCC Cnfg	25	High Gain Antenna
AIR-PWR-CORD-AP	AIR Line Cord Asia Pacific (APAC)	25	
S131RK9W-12311JX	Cisco 1310 Series IOS WIRELESS LAN LWAPP RECOVERY	25	
AIR-ACCRMK1300	Roof Mount Kit for Cisco 1300 series	7	
AIR-ACCWAMK1300=	Aironet 1300 Wall Mount Kit	18	
<b>PoE Switch for Wireless AP</b>			
WS-C2960-24PC-S	Catalyst 2960 24 10/100 PoE + 2 T/SFP LAN Lite Image	2	Access Port speed 10/100Mbps PoE
CAB-IND-10A	10A Power cable for India	2	
<b>In case 10 Gbps ports are not available in Academic Staff College</b>			
<b>Switch module &amp; ports</b>			
WS-X6704-10GE=	Cat6500 4-port 10 Gigabit Ethernet Module (req. XENPAKs)	1	
XENPAK-10GB-LR+=	10GBASE-LR XENPAK Module with DOM support	2	
<b>Products for ADDITIONAL SECURITY</b>			

<b>Cisco Security Agents</b>		
CSA-STAR-6.0.1-K9=	CSA 6.0.1 Starter Bundle SKU	1
CSA-B500-DTOP-K9	Cisco Security Agent [500 Desktop Agent Bundle]	1
<b>Server Hardware</b>	<b>Compatible Server to be procured by BHU</b>	
<b>Cisco Network Admission Control</b>		
<b>Manager</b>		
NACMGR-LTEFB-K9	NAC Appliance 3315 Manager Failover Bundle -max 3 Servers	1
CAB-ACU	AC Power Cord (UK), C13, BS 1363, 2.5m	2
NAC-MGR-47-K9	NAC Appliance Manager Release 4.7	2
NAC3315	NAC Appliance 3315 Manager Hardware	2
<b>Server</b>		
<b>Wired LAN</b>		
NAC3315-500FB-K9	NAC Appliance 3315 Server Failover Bundle -max 500 users	1
CAB-ACU	AC Power Cord (UK), C13, BS 1363, 2.5m	2
NAC-SVR-47-K9	NAC Appliance Server Release 4.7	2
NAC3315-SVR	NAC Appliance 3315 Server Hardware	2
<b>Wireless LAN</b>		
NAC3315-100FB-K9	NAC Appliance 3315 Server Failover Bundle -max 100 users	1
CAB-ACU	AC Power Cord (UK), C13, BS 1363, 2.5m	2
NAC-SVR-47-K9	NAC Appliance Server Release 4.7	2
NAC3315-SVR	NAC Appliance 3315 Server Hardware	2
<b>Firewall for Server Farm</b>		
ASA5520-BUN-K9	ASA 5520 Appliance with SW, HA, 4GE+1FE, 3DES/AES	2
CAB-ACU	AC Power Cord (UK), C13, BS 1363, 2.5m	2
SF-ASA-7.2-K8	ASA 5500 Series Software v7.2	2
ASA-VPN-CLNT-K9	Cisco VPN Client Software (Windows, Solaris, Linux, Mac)	2
ASA5520-VPN-PL	ASA 5520 VPN Plus 750 IPsec User License (7.0 Only)	2
ASA5500-ENCR-K9	ASA 5500 Strong Encryption License (3DES/AES)	2
SSM-BLANK	ASA/IPS SSM Slot Cover	2
ASA-180W-PWR-AC	ASA 180W AC Power Supply	2
<b>Cisco Secure Access Control Server ( AAA)</b>		
CSACS-1120-K9	ACS 1120 Appliance.Supports ACS 4.2 and	2

	ACS 5.0 SW		
CAB-ACSA	AC Power Cord (India/South Africa), C13, BS 546, 1.8m	2	
CSACS-5-BASE-LIC	Cisco Secure ACS 5 Base License	2	
CSACS-5.0-SW-K9	Config Option: ACS 5.0 software loaded on 1120	2	
<b>Edge Switch 10/100/1000</b>			
<b>Access Switch 24-port (uplink SFP)</b>			
WS-C2960G-24TC-L	Catalyst 2960 24 10/100/1000, 4 T/SFP LAN Base Image	1	Access Port speed 10/100/ 1000 Mbps
CAB-IND-10A	10A Power cable for India	1	
GLC-SX-MM=	GE SFP, LC connector SX transceiver	2	
<b>Access Switch 48-port (uplink SFP)</b>			
WS-C2960G-48TC-L	Catalyst 2960 48 10/100/1000, 4 T/SFP LAN Base Image	6	Access Port speed 10/100/ 1000 Mbps
CAB-IND-10A	10A Power cable for India	6	
GLC-SX-MM=	GE SFP, LC connector SX transceiver	12	
<b>Access Switch 48-port (without SFP)</b>			
WS-C2960G-48TC-L	Catalyst 2960 48 10/100/1000, 4 T/SFP LAN Base Image	3	Access Port speed 10/100/ 1000 Mbps
CAB-IND-10A	10A Power cable for India	3	
GLC-SX-MM=	GE SFP, LC connector SX transceiver	0	
<b>PoE Switch for Wireless AP</b>			
WS-C2960S-24PS-L	Catalyst 2960S 24 GigE PoE 370W, 4 x SFP LAN Base	2	Access Port speed 10/100/ 1000 Mbps PoE
CAB-IND	Power cable for India	2	
CAB-CONSOLE-USB	Console Cable 6 ft with USB Type A and mini-B	1	
<b>Dedicated IPS Device</b>			
GX5008-C-V2	Proventia Network IPS GX5008-C (Fail Closed, 8 TX-Copper Protected Ports)	1	
ABYP-4T-0S-0L-P	External Power Failure Bypass Unit (4 TX-Copper Segments)		
PROVENTIA-G-MAINT	Tech Support, Advanced Exchange, and Updates for Proventia GX5008-C		

ABYP-4T-0S-0L-M	Technical Support and Maintenance for ABYP-4T-0S-0L-P	
SP-BRZ-P	Site Protector Bronze	
SP-BRZ-M	SiteProtector Bronze Technical Support and Updates	



### ANNEXURE III Library Details

	LOCATION DESCRIPTION	DATA RUNS	Total DATA RUNS		
		Number of Locatio	DATA (A) YELLOW	TOTAL NODES	1 PORT FACE PLATE
<b>Server Room</b>	<b>Main Distribution</b>				
	Server points	1	18	18	18
	Covered Office	1	12	12	12
	Book Stack Old	1	40	40	40
	GF Lib Hall	1	32	32	32
	Corner Room	1	2	2	2
	Prof.Incharge	1	5	5	5
	<b>Total</b>		<b>6</b>	<b>109</b>	<b>109</b>
	<b>Distribution-1</b>				
<b>Lib 1st Floor</b>	Lib Hall	1	44	44	44
	04 Corner Room	1	8	8	8
	News Paper/Periodical	1	8	8	8
	<b>Total</b>		<b>3</b>	<b>60</b>	<b>60</b>
	<b>Distribution-2</b>				
<b>Govt&amp;publicatio</b>	Govt&Publication	1	24	24	24
	purchase	1	15	15	15
	<b>Total</b>		<b>2</b>	<b>39</b>	<b>39</b>
	<b>Distribution-3</b>				
<b>Reading Hall</b>	Reading Hall	1	20	20	20
	Periodical & Office	1	24	24	24
	<b>Total</b>		<b>2</b>	<b>44</b>	<b>44</b>
	<b>Distribution-4</b>				
<b>Technical Cell</b>	Technical Cell	1	24	24	24
	New Stack	1	20	20	20
	<b>Total</b>		<b>2</b>	<b>44</b>	<b>44</b>
	<b>Distribution-5</b>				
<b>Manu Script Section</b>	Manu Script Section	1	24	24	24
	<b>Total</b>		<b>24</b>	<b>24</b>	<b>24</b>
	<b>Distribution-6</b>				
<b>Main Gate</b>	Main Gate	1	5	5	5
	Hall Counter	1	10	10	10
	Teacher Room	1	5	5	5
	Room No: 7B(10)	1	10	10	10
	Corner Room	1	2	2	2

<b>Net Lab</b>	<b>Total</b>		<b>32</b>	<b>32</b>	<b>32</b>
	<b>Distribution-7</b>				
	Net Lab	1	24	24	24
	Text book area	1	14	14	14
	Girls Reading Area	1	10	10	10
	<b>Total</b>		<b>48</b>	<b>48</b>	<b>48</b>
	<b>Grand Total</b>		<b>400</b>		

**SCHEDULE – I**

***QUESTIONNAIRE: Must be filled in necessarily by the tenderers and cross referencing with support documents and submitted with technical bids.***

- |  |                    |
|--|--------------------|
| 1- Have you submitted OEM's authorization Certificate for your firm  | Yes/No             |
| 2- How long you are in the networking business   | 2 Yrs./3 Yrs./More |
| 3- Have you completed at least 3 such projects   | Yes/No             |
| 4- What is the turnover of your company for Network related work for last 2 years  | 5 Crores /More     |
| 5- Do you/your OEM have ISO 9001 certification For quoted product.   | Yes/No             |
| 6- (a) How many Educational Institution/University campus LAN Projects have been completed by you? Give details.<br>(b) How many other campus LAN projects have been completed by you? Give details.                     |                    |
| 7- Have you submitted the draft for Earnest money  | Yes/No             |
| 8- Will you be able to provide 24x7 support for the quoted products.   | Yes/No             |
| 9- For how long you are in this business in Indian market.   | ..... Years        |
| 10- Would your products be integrated with the existing devices used in the campus network phase I and II in B.H.U. and the servers on the net.<br>(Give page no. in technical bid where integration has been suggested) | Yes/No             |
| 11- Would system Integrator provide the services   |                    |

- of a resident OEM certified engineer during warranty and A.M.C. Yes/No
- 12-Does system Integrator have service level agreement with OEM during the warranty & A.M.C. period. Yes/No
- 13-The project completion period is four months from the date of the issue of the award of the contract else penalty clause is listed in section 2(11b) of tender. Is it agreeable to you? Yes/No
- 14-Have you submitted documentary proof of features for the quoted items. Yes/No
- 15- Does your proposed network solution support upgradeability. Yes/No
- 16-Can you extend warranty for 3 years instead of one year without any additional cost. Yes/No
- 17-Are you ready to undertake the A.M.C. for the existing campus Network phase I and II of B.H.U. Yes/No
- 18-Do you agree with payment terms as mentioned in section 2.19 of the tender. Yes/No

### **FOR ACCESS SWITCH**

- 19-Does Access switch quoted have support for 10/100/1000 based Tx Yes/No
- 20-Does it have uplink slot. Yes/No
- 21-Does it have stacking facility Yes/No

- 22-Does the Access Switch have support for 100 BFX and 1000 BFX/LX/T Yes/No
- 23-What is its back plane speed? ....
- 24-How many Mac addresses it can support.? ....
- 25-Does it support half duplex and full duplex mode on all its ports. Yes/No
- 26-Can it be managed through Web. Yes/No
- 27-Can it be managed from remote terminal port wise? Yes/No
- 28-Does it support it standard protocols for voice video & data. Yes/No
- 29-Have you given list of all standard protocols supported by the switch. Yes/No

**FOR FIBER OPTIC CABLE –MMF**

- 30-Have you submitted third party certification for the cables. Yes/No
- 31-How many years of certification is provided. ....years
- 32-What is the max. distance supported on 10 Gigabit on the quoted M M Fiber .....meters
- 33-Have you submitted a separate specification sheet for Fiber loss for MMF at appropriate bandwidths Yes/No
- 34-What is the tensile strength for MMF as per IEC-794-1-E7 standard .....

- 35-What is the Crush resistance for MMF cables .....  
36-What is the Impact resistance for cables  
as per standard IEC-794-1-E7 .....  
37-What is the Link resistance as per standard  
IEC-794-1-E10 .....  
38-Do these cables conform to tracer marker  
method for Tube identification. Yes/No  
39-What is the minimum bend radius for  
MMF .....  
40-Does Fiber optic connector conform to  
International standards Yes/No  
(if so, specify which)  
41-Does Fiber Optic patch cords conform to  
International Standards Yes/No  
(if so, specify which)  
42-What UTP cable is quoted e CAT5/CAT6  
43-Does UTP cable conform to TIA-568 standards  
as given in tender document Yes/No  
44-Does UTP cable quoted support 10/100/1000  
Mbps connectivity. Yes/No

## SCHEDULE-II

### SCHEDULE OF QUANTITIES & PRICES FOR CABLE LAYING & COMMISSIONING, ETC.

SN	DESCRIPTION OF ITEMS	QTY/ UNIT	RATE	AMOUNT
1	Fiber optic cable laying in GI pipe in ground including excavation of all types of soil , sand cushioning , protective covering and refilling the trench including cutting of roads and making the roads, etc as required			
2	Fixing of GI pipe with the accessories on the surface of wall / ceiling / column, etc. with clamps, saddles, screws, etc as required.			
3	Fiber optic cable pulling in GI pipe on the wall/ ceiling/ column, etc. as required.			
4	Fixing of PVC Casing with accessories on the surface of wall / ceiling / column etc. with clamps, saddles, screws, etc as required.			
5	UTP cable laying in GI pipe in ground including excavation of all types of soil , sand cushioning , protective covering and refilling the trench including cutting of roads and making the roads, etc as required .			
6	UTP Cable pulling in PVC Casing on the wall/ Ceiling / Column, etc. as required			
7	Installation & Termination of Jack panel .			

<b>SN</b>	<b>DESCRIPTION OF ITEMS</b>	<b>QTY/ UNIT</b>	<b>RATE</b>	<b>AMOUNT</b>
8	Installation and Termination of Information Outlet			
9	Installation of Racks			
10	Testing and Certification charges for cabling & Points.			
11	Fiber Optic Connectorisation and Installation Charges.			
12	Integration and Documentation Charges for Complete Network.			
13.	Any other additional item			
	<b>TOTAL</b>			