



## **North Orissa University**

**Sriram Chandra Vihar, Takatpur, Baripada-757003, Odisha, India**

Notice No. <sup>164</sup> ~~163~~ /NOU/Store/155/2017-18

Date: 10.1.2019

### **TENDER NOTICE**

Sealed Two-bid tenders are invited from Original Equipment Manufacturers (OEM)/ Authorised Dealers/Partners, for Supply, Installation and Commissioning of various Items at North Orissa University, Sriram Chandra Vihar, Takatpur, Baripada-757003, Odisha ((NOU Hereinafter) in the prescribed format as per the requirements enclosed in the schedule of items given in bid documents. Bid documents with details terms & conditions is to be downloaded from NOU website '<http://nou.nic.in>' or can be obtained from office of NOU.

Bidders may bid for one or more Items. Separate bid from different firms is also allowed for different Items. Bids will be evaluated for each item individually.

The tenders along with the tender cost and EMD as given in bid documents in the sealed envelope should be super scribed with "Supply, Installation and Commissioning of Item Sl No - 1 to Sl No-16" at North Orissa University, Baripada Campus" and submitted through Speed Post / Regd. Post or in the Tender box at the office of the Registrar, NOU by **01 P.M on or before 29.01.2019**. The technical bid shall be opened on **29.01.2019 at 03 P.M.** & Price Bid shall be opened on same day. More details are available at our University Website: <http://nou.nic.in>. The authority reserves the right to accept / reject any or all tenders without assigning any reason thereof and will not be responsible for any postal delay. *No correspondence in this regard will be entertained.*

The interested bidders can inspect the site at any time during working hours on any working day at their own cost before submission of tender. No consideration shall be entertained regarding non awareness of the site conditions and constraints after submission of tender.

Memo <sup>165</sup> ~~164~~ /NOU,

 Registrar  
North Orissa University

Dated: 10.1.2019

Copy to Director, Computer Centre /PS to VC/PA to Registrar/COF/Account Section-I ,with a soft copy of details tender documents for information and necessary action.

Registrar  
North Orissa University

Tender Notice Supply, Installation and Commissioning of various Items at North Orissa University, Baripada Campus

**North Orissa University**

Sriram Chandra Vihar  
Takatpur  
Baripada – 751003,  
Dist: Mayurbhanj  
Odisha, India  
Tel : +91-6792-255129  
Fax : +91-6792-253908

NOU invites sealed offers in Two-Bid form for **Supply, Installation and Commissioning of various Items at North Orissa University, Baripada Campus**

Interested parties may download the Tender Document from University Website <http://nou.nic.in>

1. Tender Advertisement: 104/NOU/store/155/2017-18 /Dt.10.01.2019
2. Submission of Bids: 29.01.2019 upto 1 P.M
3. Technical Bid Opening Date: 29.01.2019 at 03 P.M
- 3A. Financial Bid opening Date: 29.01.2019
  
4. Tender fee (Non-Refundable): Rs. 200/-(Rupees two hundred only) in the form of a DD/Pay Order favouring The Comptroller of Finance, NOU, Takatpur payable at Baripada. In case documents are downloaded from the website, DD / Pay Order of Rs. 200/-favouring Comptroller of Finance, NOU payable at Baripada must be enclosed with the Technical Bid.
  
5. Earnest Money Deposit: The Bidder shall submit their quotes along with EMD of Rs. 5,000/-(Rupees Five Thousand only) or 1% of the Bid cost whichever is higher. EMD should be in the form of DD / Bank Guarantee favouring The Comptroller of Finance, North Orissa University, Takatpur, Baripada-751003 payable at Baripada. This Bank Guarantee should be valid for Bid Validity period mentioned in **Clause 1 under SECTION II.**

## **SECTION I: INVITATION FOR BIDS (IFB)**

### **Sub: Supply, Installation and Commissioning of various Items at North Orissa University, Baripada Campus**

#### **1. Scope of Work & Technical specifications:**

Detailed scope of work and technical Specifications are as per enclosed **Annexure I**

#### **2. Eligibility Criteria for bidders:**

The eligibility criteria for pre-qualification of bidders are as under:

- i. The Tenderer(s) must submit the exclusive tender specific authorization from the Registered Company/OEM. In case the Tenderer(s) unable to submit the exclusive authorization letter from the manufacturer, the offer will be summarily rejected. The certificate so furnished should clearly incorporate the firm name and address from where after sales services shall be rendered. In absence of such authorization, the Bid is liable to be rejected.
- ii. The OEM must have India presence for last 10 years.
- iii. Products to be offered should be new, unused and of current design, not declared obsolete or not declared to become obsolete in next 2-years.
- iv. OEM must not offer any co-branded product (i.e., Product bearing brand shared with other OEM).
- v. The bidder should be an organization / company in operation with office and Service Support Center for the last Five years as on 31st March 2018 in Odisha preferably within 270 kms range of Baripada, to ensure satisfactory service support after sales.
- vi. The tender(s) should have executed installations of the similar nature work. Proofs of the same like PO copies, installation & completion reports, performance certificates, with address & contact details of the referred installation list should be submitted with the bid. In absence of supporting documents, the bid is liable to be rejected.
- vii. Execution of job has to done by single vendor only no third party transfer will be allowed
- viii. The bidder should be a registered firm with Sales Tax Authority. The bidder should furnish the registration certificate, VAT registration certificate, VAT Clearance Certificate, PAN No. detail, Recent IT Return copy along with the tender paper. Enclose copies supporting documents. In absence of such certificate, the Bid is liable to be rejected.
- ix. The bidder's firm must be a financially sound and established firm fulfilling all statutory & regulatory requirements of its functioning in India & Odisha. Proof of the registration

& other compliances and turn over, audit reports, balance sheets etc for company's financial soundness as required may be furnished for last three years from 2015 to 2018 (must be certified by CA failing which the bid is liable to be rejected).

- x. The bidder or ( Registrar / OEM in case bidder is authorized channel partner etc ) must have an experience of minimum 05 years or more for Sales, Installation & Service support for execution of projects.
- xi. The bidder should not be black listed in any of the Govt. Organization. Undertaking in this regard must be submitted.
- xii. Before submission of the tender, please verify the eligibility criteria and ensure fulfilling all the terms and conditions.

### **3. Bid Submission:**

The offer must be submitted in two parts sealed separately as Part-I (Technical Bid) and Part-II (Price Bid) in separate sealed envelopes. Both the bids shall be enclosed in another sealed envelope super scribing:

Tender Notice No. : **104/NOU/store/155/2017-18 /Dt.10.01.2019**

Due date & time : **dt.29.01.2019**

**"Offer for with "Supply, Installation and Commissioning of Item No 1 Item 16 " at North Orissa University, Baripada Campus"** and the address of the firm should be mentioned in the sender side of the envelope with phone number.

#### **3.1 Part - I (Technical Bid) shall contain:**

- Technical bid with full details including description of make & model of materials so as to enable technical assessment of the proposal.
- An Undertaking / Authorization certificate as mentioned under Eligibility Criteria.
- **Company Profile (as per PROFORMA I & II) along with all the supporting documents as desired.**
- Non-Refundable Tender fee of Rs. 200/- (Rupees Two hundred only) in the form of DD / Pay Order favoring Comptroller of Finance, North Orissa University, payable at Baripada. (In case the tender document is down loaded from the website). Quotations without Tender Fee shall be rejected.
- Refundable Earnest Money Deposit (EMD): Offers without Earnest Money Deposit will be rejected.

- The warranty services and extended warranty service for three years are required at NOU, Takatpur, Baripada. A certificate of warranty as specified in the technical specification should be provided by the OEM in original.
  - The detailed technical specifications with Make & Model, Compliance Statement must be as per the technical specifications (as per **Annexure-I**) which needs to be supported by relevant product brochure etc. Without proper Compliance Statement the bid is liable to be rejected.
- z
- Acceptance to the terms and conditions laid down in the tender document. Any deviation in the general terms and condition will lead to the rejection of the bid.

**If the technical offer contains any price information, the offer will be summarily rejected.**

**3.2 Part –II (Price Bid)** should contain Only Price Details in the prescribed format as per **Annexure-II** with proper seal and signature of authorized person. Prices should be given in INR in both figures and words.

#### **4. Opening of Technical & Price Bid**

Only the technical bids will be opened on 20.04.2019 at 3 P.M. Interested bidders may attend the technical bid opening as per the schedule. Price Bids of only the short-listed / technically qualified bidders will be opened in presence of the bidder or their authorized representative on the same day.

The outer cover super scribing in which these sealed covers (i.e. Part I & II) are to be placed should be addressed and reach to the

  
The Registrar,  
North Orissa University  
Takatpur  
Baripada-757003  
Odisha, India.

## SECTION II: INSTRUCTION TO BIDDERS (ITB)

### 1. Bid Validity

Bids shall be valid for minimum 120 Days from the date of opening of technical bid. A bid valid for a shorter period shall not be considered. NOU-Baripada may ask bidders to extend the period of validity.

### 2. Delivery & Installation:

The complete delivery and installation as per our present requirement must be completed at NOU, Baripada within 60 days **from the date of P.O.** to meet the time lines. However, separate order may be placed for additional quantities on the same rates on "As and When Required" basis within the Bid Validity period as above. NOU-Baripada reserves the right to increase or decrease the Bill of Material as per the requirement without any change in the rates quoted.

Installation and Commissioning shall include the following:

- a) Installation and Testing of the Equipment, Machineries etc. should be supplied by the tenderer.
- b) It will be the responsibility of the tenderer to provide all necessary spares and consumables, softwares (if any) which may be required during installation and commissioning, at no extra cost to purchaser.
- c) The tenderer is to bring their own testing and measuring instruments required for installation, testing, commissioning, which can be taken back after completion.
- d) The tenderer should provide all necessary raw materials for running of the machine during commissioning.
- e) In case the procured items/equipments directly or indirectly need Computer softwares or in case the items are themselves softwares, those softwares must be Supplied in form of CD/DVD. In case of items/equipment from OEMs, OEM CD must be Supplied. Otherwise the software CD must be written into a CD/DVD and to be supplied. In case of Pre-Installed softwares, appropriate Recovery Software CD must be supplied

### 3. Documentation

Detailed **technical manuals, handbooks, drawings, Warranty card** and **Factory Quality Assurance checklist, test results** and any other certifications mentioned in the Technical specifications shall be supplied along with the consignment.

Supplied manuals/handbooks must cover detailed technical specifications and installation, operation, maintenance and System Safety procedures.

For Experimental setups, **details of theory, procedure and methods of taking measurements etc. should be provided in the form of hand books for each experiment.**

The receipts for taxes paid, if any, for the supplied materials should also be submitted

### 4. Product Specifications & Compliance Statement

The bidder should quote the products strictly as per the tender specifications and only of desired / preferred brands. Complete technical details along with brand, specification, technical literature etc. highlighting the specifications must be supplied along with the technical bid. The compliance statements should be supported by authentic documents. **Each page of the bid and cuttings / corrections shall be duly signed and stamped by the authorized signatory. Failure to comply with this requirement may result in the bid being rejected.**

5. In case of any discrepancy between rates mentioned in figures and words, the latter shall prevail. If there is a discrepancy between the unit price and the total price that is obtained by multiplying the unit price and quantity, the unit price shall prevail and the total price shall be corrected.

6. Materials must be properly packed against any damage and insured up to the destination. The material should be directly supplied to NOU, Baripada. All the expenses involved in shipping the equipment to NOU, Baripada shall be borne by the Bidder. All aspects of safe delivery shall be the exclusive responsibility of the Bidder. NOU-Baripada will have the right to reject the component/equipments supplied, if it does not comply with the specifications at any point of installation/inspection.

7. NOU-Baripada reserves the right to divide / split the order between more than one technically qualified bidder to meet the **Technical Requirements and Delivery Schedule**.

8. Earnest Money is liable to be forfeited and bid is liable to be rejected, if the bidder withdraw or amends, impairs or derogates from the tender in any respect within the validity period of the tender.

9. The Earnest Money of all the unsuccessful bidders shall be returned as early as possible but within the Bid Validity period but not before 30 days from the date of Purchase Order. No interest will be payable by NOU on the Earnest Money Deposit. The Earnest Money of successful bidder shall be returned after successful performance of the equipment.

10. If any equipment or part thereof is lost or rendered defective during transit, the supplier shall immediately arrange for the supply of the equipment or part thereof, as the case may be, at no extra cost.

11. The rates should be quoted in Indian Rupees for delivery at the Site **BOTH IN FIGURES & WORDS**. All prices shall be fixed and shall not be subject to escalation of any description during the bid validity period.

**12. Rate Contract with DGS&D, Government e-Market or any other Government Organisation:**

In case the tenderer has entered into a Rate Contract with DGS & D, Government e-Market or any other Government Organisation such as EPM, rate contract preference, validity, number & copy of rate contract have to be submitted along with tender.

**13. Comprehensive Maintenance Contract:**

The tenderer shall be under the obligation of entering into a Comprehensive Maintenance Contract (CMC) with NOU for a minimum period of two years, renewable if felt necessary, on mutually acceptable rates, terms and conditions. CMC shall start after the completion of Warranty.

The scope of CMC shall cover maintenance and supply/replacement of materials and components, for smooth and reliable operation of the systems without trouble.

Accordingly, the tenderer has to offer rates for the CMC structure per equipment along with the price for the Systems and other associated Equipment supplied.

**14. After Sales Service:**

During the warranty period and subsequently, after signing of Agreement for CMC the tenderer shall attend to the problems reported by the users of NOU on a priority basis.

For any problem reported, the tenderer shall attend and rectify the problem within 7 (seven) days or provide a standby system of the similar configuration.

The report on any problem will be informed through phone or fax number of which shall be given by the tenderer.

The branch office of the concerned firm will be fully responsible to provide maintenance service, in case of any negligence, in providing the service by the tenderer.

On failure to comply with those instructions, the Bank Guarantee provided for the warranty period shall be invoked.

**15. Tax Concession:**

Tax Concession if any is to be availed on production of the required certificates applicable to Educational Institution.

**16. Discount:**

Our Institute is a pioneer Institution in the field of Teaching and Research in Science, Humanities and allied disciplines and do not run with profit motive. As such we are availing price discount for purchase of equipment/instruments.

The rate of discount or any other Institutional benefit arising out of Govt. Policy etc., on each item may also be indicated in the bid specifically.

**17. The price should be inclusive of all taxes strictly as per the format of Annexure-II. However the bidder may give details of tax components in a separate sheet which to be enclosed in the price bid in Annexure II. The offers which are not as per the format will be rejected.**



**18. Penalty:**

If the delivery, installation and commissioning is not carried out in time as specified in other part of the tender document, the tenderer/manufacturer will be charged @ 1 % (one per cent) per week of the total value of the concerned machine / equipment.

**19. NOU-Baripada** reserves the right to accept / reject the offers or cancel the whole tender proceedings without assigning any reason whatsoever. Offers through Email / Fax, etc and open offers shall not be accepted. Late / Delayed offers shall not be accepted under any circumstances. Incomplete offers shall be rejected outright. In case the specified date for the submission of offers being declared as a holiday for NOU-Baripada, the bid-closing deadline shall stand extended to the next working day up to the same time.

**20.** Any attempt of negotiation direct or indirect on the part of the Tenderer with the authority to whom he has submitted the tender or authority who is competent finally to accept it after he has submitted his tender or any endeavour to secure any interest for an actual or prospective bidder or to influence by any means the acceptance of a particular tender will render the tender liable to be rejected.

**21.** The prospective bidders requiring any clarification about the contents detailed in the tender document may notify to NOU-Baripada in writing at NOU's address. Clarifications received till 72 hours before the closing date / time of receipt of bids will be responded.

**22.** The items/equipment supplied must be supported by the bidder's technical support engineers. The support must be available 24 hours in a day, seven days a week and 365 days a year. Also provide toll free number / web / email so that it should be possible to contact the Principal Bidder's (OEM's) support Centre.

**23. Unsatisfactory Performance**

The Parties herein agree that NOU-Baripada shall have the sole and discretionary right to assess the performance(s) of the Bidder component(s), either primary and or final, and NOU-Baripada, without any liability what so ever, either direct or indirect, may reject the system(s) component(s) provided by the Bidder, in part or in its entirety, without any explanation to the Bidder, if found unsatisfactory and not up to level of the acceptance of NOU-Baripada.

**24. Disclaimer**

This Tender / Request for Proposal (RFP) is not an offer by NOU-Baripada, but an invitation for bidder's response. No contractual obligation whatsoever shall arise from the RFP process.

**25. Declaration:**

The bidder would be required to give certificate as below in his commercial bid.

## **26. Solving Disputes:**

The Institution & the Tenderer shall make all efforts to resolve amicably by direct informal negotiation on any disagreement or dispute arising between them under or in connection with this contract.

All disputes arising out of the contract shall be referred to courts under the jurisdiction of the Baripada only.

**The selection for procurement of equipments will be based on quality and performance along with cost. In this context decision of technical committee nominated by North Orissa University is final based on documentary evidence or actual physical verification.**

*The above terms and conditions except those otherwise agreed upon shall form a part of the Purchase Order.*

## **27. Force Majeure**

Notwithstanding the provisions of GCC clauses 22,23 and 24, the supplier shall not be liable for forfeiture of its performance security, liquidated damages or termination for default, if and to the extent that its delay in performance or other failure to perform its obligations under the contract is the result of an event of Force Majeure.

For purposes of the clause, "Force Majeure" means an event beyond the control of the supplier and not involving the supplier's fault or negligence and not foreseeable. Such events may include, but are not restricted to, acts of the purchaser in its sovereign capacity, wars or revolutions, fires, floods, epidemics, quarantine restrictions and freight embargoes.

If a Force Majeure situation arises, the supplier shall promptly notify the purchaser in writing of such conditions and the cause thereof. Unless otherwise directed by the purchaser in writing, the supplier shall continue to perform its obligations under the contract as far as reasonably practical, and shall seek all reasonable alternative means for performance not prevented by the Force Majeure event.

## **28. Termination for insolvency**

If the supplier becomes bankrupt or otherwise insolvent, the purchaser may terminate the contract by giving written notice to the supplier, without any compensation to the supplier, provided, the such termination will not prejudice or affect any right of action or remedy which has accrued and / or will accrue thereafter to the purchaser.

**"I/We UNDERSTAND THAT THE DETAILS OF THE ITEMS/EQUIPMENTS/SERVICES AS PROVIDED ABOVE ARE SUBJECT TO CHANGE. I/WE AGREE THAT IN CASE OF ANY CHANGE IN THE QUANTITIES REQUIRED FOR ANY OF SERVICES, I/ WE WOULD BE SUPPLYING THE SAME AT THE RATES AS SPECIFIED IN COMMERCIAL BID. I /WE AGREE TO**

**ADHERE TO THE RATES GIVEN ABOVE EVEN IF THE QUANTITIES UNDERGO A CHANGE".**

**SIGNATURE OF THE BIDDER WITH STAMP**

## **SECTION III: SPECIAL CONDITIONS OF CONTRACT (SCC)**

### **1. Price Basis**

Price quoted should be in the prescribed format as per Annexure-II. The quoted price will be considered firm and no price escalation will be permitted during the bid validity period. Maximum educational discount as could be offered should also be mentioned.

### **2. Billing :**

Billing is to be done in the name of The Registrar, North Orissa University, Takatpur, Baripada-751003. No advance payment or payment against Performa invoice will be made. Payment will be made on the basis of the actual bill of material supplied, services rendered after receipt, inspection, installation/testing of surveillance system. and duly certified by authorized representative of NOU. The payment shall be made on actual measurement basis.

### **3. Payment**

100% of invoice value after successful Installation of Item(s) at North Orissa University, Baripada Campus, Baripada and submission of invoice.

### **4. Warranty**

The parts/whole of the Computer Network Setup should cover at least warranty for 1 year or as specified in the supplied instruments/items.

### **5. Others**

All damaged or unapproved goods shall be returned at the Tenderer risk and cost and the incidental expenditure thereupon shall be recovered from the concerned party.

# Annexure-1: Technical Bid

## PRE-QUALIFICATION/ELIGIBILITY

## PROFORMA-I

**PARTICULARS OF THE BIDDERS TO BE FURNISHED IN TECHNICAL BID FOR THE PURPOSE OF PRE-QUALIFICATION:**

1	Name of Organization /Firm / Company	
2	Address & Telephone Number	
3	Year of establishment	
4	Status of the Firm (Company/Firm/Proprietary) enclose the supporting document	
5	Whether registered with the registrar of companies/registrar of firms. If so attach the copy of certificate.	
6	a)Name & Mobile Number of Directors/Partners/Proprietor	i) ii) iii)
7	Whether registered with sales tax. If so, mention number& date. Furnish also copies of sales tax registration certificate Mention the VAT/ CST enclose the relevant copies with clearance certificates	
8	Whether an assesses of income tax. If so, mention permanent account number. Furnish copy of PAN, Latest Income Tax Return filed.	
9	State Annual turnover of the company.  Furnish copies of audited balance sheet & profit & loss account for the last three years certified by CA.	

10	Specify the specification with brand of the 4500 lumens wireless projector with authorization of OEM/Registrar, if required.	
11	Status and details of disputes/Litigation/Arbitration, if any.	i) ii) iii)

I certify that I meet the eligibility criteria described in section 2 of the technical bid.

Place:

Date:

Name, Signature & Seal of Bidder:

**PRE-QUALIFICATION**

**PROFORMA-II**

**PARTICULAR IN RESPECT OF 3 MAJOR WORKS EXECUTED IN LAST 3 YEARS**

**(TO BE FURNISHED IN TECHNICAL BID)**

SL. No.	Name of work and project with address	Short Description of work executed	Name and address of owner	Value of work executed	No. of Ports (Switch Ports)	Stipulated time of completion	Actual time of completion


**NB: Copies of Work Order / P.O., Completion certificate, Performance certificate must be attached.**

Place:

Date:

Signature of vendor

# Annexure-2 PRICE BID

Sl. No	ITEM	Qty	Make & Model	Rate per unit (In Rs.)	Total Price (In Rs.)
1					
2					
3					
4					
5					
6					
<b>Grand Total (Rs.)</b>					
<b>Grand Total (In words)</b>					

Technical Specification



# **Annexure-3 (IT Equipments (Desktop PC, Servers, Laser printers, MS Office))**

## **Item 3.1: Laser MFP printer**

**Qty: 02 ( one for Career & Counselling Cell, one for office )**

Make: HP/Samsung/Canon

### **Specification:**

<b>Features</b>	<b>Description</b>
FUNCTIONS	Print, copy, scan, fax
PRINT RESOLUTION	Black (Best): Up to 600 x 600 x 2 dpi; Black (Normal): Up to 600 x 600 x 2 dpi
PRINT SPEED	Black (Letter): Up to 26 ppm; First Page Out: As fast as 8.5 sec
NUMBER OF PRINT CARTRIDGES	1 (black)
PRINTER SMART SOFTWARE FEATURES	Duplex printing
SCAN TYPE	Flatbed, ADF
SCANNER ADVANCED FEATURES	Instant on scanner, 35-page Automatic Document Feeder (ADF), OCR software in box
SCAN RESOLUTION	Enhanced: Up to 19,200 dpi; Hardware: Up to 1200 x 1200 dpi Optical: Up to 1200 dpi
SCAN SPEED	Black (Normal): Up to 15 ppm; ADF Speed: Up to 15 ppm
SCAN SIZE ADF (MAXIMUM)	8.5 x 14 in (216 x 356 mm)
SCAN FILE FORMAT	JPEG, TIF, BMP, GIF, PDF, PNG
BIT DEPTH	24-bit
COPY RESOLUTION	Black (Text): Up to 600 x 600 dpi; Black (Graphics): Up to 1200 x 1200 dpi Color (Text and Graphics): Up to 1200 x 1200 dpi
COPY SPEED	Black (Best, Letter): Up to 15 cpm; Black (Best, A4): Up to 15 cpm
MAXIMUM NUMBER OF COPIES	Up to 99 copies
COPY REDUCE/ENLARGE SETTINGS	25 to 400%
COPIER SETTING	Up to 99 multiple copies, Collation, Reduce/Enlarge from 25% to 400%, Contrast (Lighter/Darker), Resolution (Copy quality), ID copy, Copy optimization, Draft mode copy, Manual duplex
FAX RESOLUTION	Black Photo Grayscale: 300 x 300 dpi (halftone enabled)

	Black and White, Standard Mode: 203 x 98 dpi; Black and White, Superfine Mode: 300 x 300 dpi (no halftone)
FAX SPEED DIALING, MAX NUMBERS	120 numbers
FAX MODEM	33.6 kbps
FAX MEMORY	Up to 400 pages
FAX FEATURES	Auto Fax Reduction Supported: Yes; Auto Redial: Yes Fax Delayed Sending: Yes; Distinctive Ring Detection Supported: Yes; Broadcast Locations: 119 Locations; Fax Forwarding: Yes; Fax Phone Tam Interface Supported: Yes; Polling: Yes (Poll To Receive Only); Fax Telephone Mode Supported: Yes; Junk Fax Barrier: Yes; Speed Dials, Maximum Number: Up To 120 Numbers (119 Group Dials); PC Interface Supported: Yes; Remote Retrieval: No Telephone Handset Supported: No
DUTY CYCLE (MONTHLY) <sup>4</sup>	Up to 8,000 pages
RECOMMENDED MONTHLY PAGE VOLUME	Up to 500 to 2,000 pages
STANDARD CONNECTIVITY	1 Hi-Speed USB 2.0 port, 1 10/100 Ethernet network port
NETWORK CAPABILITIES	10/100 Ethernet; Network Ready: Standard (built-in Ethernet)
CONTROL PANEL	2-line LCD text display, Buttons (Alphanumeric, Navigational), Copy buttons (Start copy, Reduce/Enlarge, Lighter/Darker, Copy menu, Number of copies), Fax buttons (Start fax, Phone book, Fax menu, Redial, Speed Dial), LED indicator lights (Setup, Left, Ok, Right, Back, Cancel)
DISPLAY	2-line LCD (text) display
MAXIMUM/STANDARD MEMORY	128 MB
PROCESSOR	Type: Freescale Coldfire V5X processor; Speed: 500 MHz
DUPLEX PRINT OPTIONS	Automatic (standard)
MEDIA TYPE AND CAPACITY	ADF: 35 sheets; Tray 1: 250 sheets; Tray 2: 10 sheets, 10 transparencies, 10 envelopes
MEDIA SIZES SUPPORTED	Tray 1 (priority feed tray): minimum: 3 x 5 in; maximum: 8.5 x 14 in; Tray 2 (main tray): minimum: 3 x 7.4 in; maximum: 8.5 x 14 in
STANDARD MEDIA SIZES (DUPLEX, IMPERIAL)	A4, letter and legal
CUSTOM MEDIA SIZES	3 x 5 to 8.5 x 14 in (76 x 127 to 216 x 356 mm)
PRINT HANDLING	Input Capacity: Up to 250 sheets, Up to 10 envelopes, Output Capacity: Up to 100 sheets, Up to 10 envelopes, Up to 10 sheets transparencies

POWER	Power Supply Type: Built-in power supply, Power Requirements: Input voltage 110 to 127 VAC (+/- 10%), 50/60 Hz (+/- 2 Hz), 5.4 A; 220 to 240 VAC (+/- 10%), 50/60 Hz (+/- 2 Hz), 2.9 A; Power Consumption: 445 watts printing, 325 watts copying, 4.7 watts ready, 0.2 watts off; Typical Electricity Consumption (TEC) Number: 1.386 kWh/Week
SOFTWARE INCLUDED	Printer Installer Driver
COMPATIBLE OPERATING SYSTEMS	Windows, MAC
ACOUSTIC	Acoustic Power Emissions: 6.5 B(A); Acoustic Power Emissions (Ready): Inaudible; Acoustic Pressure Emissions: 51 dB(A)
OPERATING ENVIRONMENT	Operating Temperature Range: 59 to 90.5o F (15 to 32.5o C) Recommended Operating Temperature: 62.6 to 77o F (17 to 25o C) Storage Temperature Range: -4 to 104o F (-20 to 40o C); Operating Humidity Range: 10 to 80% RH; Recommended Humidity Operating Range: 30 to 70% RH
WARRANTY	One-year limited warranty;
CARTRIDGES	one
ACCESSORIES	USB Cable

## Item 3.2: Laptop

**Qty: 1**

Make: Dell/Lenovo/HP

### Specification:

#### OPERATING SYSTEM

Operating System	Windows 10 Home Single Language
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#### WARRANTY

Warranty	3Yr Onsite Service-Retail
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#### Screen Details

Display Size (in inches)	18.5 inch
Screen / Display Type	18.5 inch Monitor
Maximum Resolution (in Pixels)	*

**CPU**

Processor	7th Gen Core i3
CPU Speed (in GHz)	3MB Cache, up to 3.90 GHz
Architecture	*

**SECURITY**

AntiVirus	McAfee® Multi Device 15 month subscription
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**RAM**

RAM Type	4GB Single Channel DDR4 2400MHz (4GBx1)
RAM Size in GB	4GB

**Hard Disk Drive (HDD)**

HDD Type	3.5inch 1TB 7200 rpm SATA Hard Drive
Hard Disk Drive (Storage)	1 TB

**Graphic Card Details**

Graphic Card Model	Integrated Graphics included
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**Media Access**

Optical Drive	Tray load DVD Drive (Reads and Writes to DVD/CD)
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**CONNECTIVITY**

Wireless	(802.11BGN + Bluetooth 4.0, 2.4 GHz)
Bluetooth	Bluetooth 4.0
Connectivity	(802.11BGN + Bluetooth 4.0, 2.4 GHz)

**PORTS/SLOTS**

Card Reader	1. Optical drive   2. Power button   3. 5:1 media card reader   4. Universal audio jack   5. (2) USB 3.0 ports   6. Line in/out & mic   7. VGA Connector   8. HDMI   9. (4) USB 2.0 ports   10 . Ethernet Port (RJ45)   11 . Expansion card slots   12. Power
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**Item 3.3: Server for Dept. of Computer**

# Application

Qty: 1

Make: Dell/IBM/HP

Specification:

Sl. No.	Specification of Server for Dept. of Computer Application, North Orissa University
	<b>Make: Dell/IBM/HP</b>
1	Processor: 2*Intel Xeon E5-2620v4, Clock frequency 1.7 GHz, 20 MB Cache, 8 core
2	Memory:128 GB DDR4-2400
3	Internal Storage :8 TB HOTPLUG SAS 6gb/s 10k RPM 2.5" HDD [Max upto 16 nos. drive]
4	Raid Controller : RAID 0, 1,5 in-built
5	LAN: Dual port gigabit Ethernet LAN
6	DVD: 9.5mm SATA DVD RW Drive
7	Management: IPMI 2.0 compliant;
8	High availability: Hot-plug drives bays; high-efficiency, hot-plug, redundant power supply units; fan redundancy; extended thermal support; fault-resilient memory; Internal dual SD modules
9	Chassis: 5U tower
10	Power Supply: 2*495W high-efficiency redundant power supplies
11	OS: CentOS
12	19.5" LED monitor (resolution of 1920 x 1080), wired keyboard and optical mouse shall be given
13	Installation

## Item 3.4: Windows Server for Central Library

Qty: 1

Make: Dell/IBM/HP

**Specification:**

<b>Sl. No.</b>	<b>Specification of Server for Central Library, North Orissa University</b>
	<b>Make: Dell/IBM/HP</b>
1	Processor: 2*Intel Xeon E5-2620v4, Clock frequency 1.7 GHz, 20 MB Cache, 8 core
2	Memory:128 GB DDR4-2400
3	Internal Storage :8 TB HOTPLUG SAS 6gb/s 10k RPM 2.5" HDD [Max upto 16 nos. drive]
4	Raid Controller : RAID 0, 1,5 in-built
5	LAN: Dual port gigabit Ethernet LAN
6	DVD: 9.5mm SATA DVD RW Drive
7	Management: IPMI 2.0 compliant;
8	High availability: Hot-plug drives bays; high-efficiency, hot-plug, redundant power supply units; fan redundancy; extended thermal support; fault-resilient memory; Internal dual SD modules
9	Chassis: 5U tower
10	Power Supply: 2*495W high-efficiency redundant power supplies
11	OS: Microsoft Windows Server 2016 std. edn. OLP NL
12	19.5" LED monitor (resolution of 1920 x 1080), wired keyboard and optical mouse shall be given
13	Installation

### **Item 3.5: 600 VA UPS for Desktop**

**Qty: 06 (Career Counselling Cell) +**

Make: V Guard/Emerson

**Specification: 600 VA**

### **Item 3.6: Desktop**

**Qty: 06 (Career Counselling Cell) +**

Make: Dell/Lenovo/HP

**Specification:**

**OPERATING SYSTEM**

Operating System	Windows 10 Home Single Language
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**WARRANTY**

Warranty	3Yr Onsite Service-Retail
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**Screen Details**

Display Size (in inches)	18.5 inch
Screen / Display Type	18.5 inch Monitor
Maximum Resolution (in Pixels)	*

**CPU**

Processor	7th Gen Core i3
CPU Speed (in GHz)	3MB Cache, up to 3.90 GHz
Architecture	*

**SECURITY**

AntiVirus	McAfee® Multi Device 15 month subscription
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**RAM**

RAM Type	4GB Single Channel DDR4 2400MHz (4GBx1)
RAM Size in GB	4GB

**Hard Disk Drive (HDD)**

HDD Type	3.5inch 1TB 7200 rpm SATA Hard Drive
Hard Disk Drive (Storage)	1 TB

**Graphic Card Details**

Graphic Card Model	Integrated Graphics included
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**Media Access**

Optical Drive	Tray load DVD Drive (Reads and Writes to DVD/CD)
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**CONNECTIVITY**

Wireless	(802.11BGN + Bluetooth 4.0, 2.4 GHz)
Bluetooth	Bluetooth 4.0
Connectivity	(802.11BGN + Bluetooth 4.0, 2.4 GHz)

**PORTS/SLOTS**

Card Reader	1. Optical drive   2. Power button   3. 5:1 media card reader   4. Universal audio jack   5. (2) USB 3.0 ports   6. Line in/out & mic   7. VGA Connector   8. HDMI   9. (4) USB 2.0 ports   10 . Ethernet Port (RJ45)   11 . Expansion card slots   12. Power
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**Item 3.7: MS Office Home and Student 2016 (Perpetual License)**

Qty: 70

**Annexure-4 (Online UPS System)**

**Item 4.1: Online UPS System for Central Library**

**Specification:**

a.	<b>UPS Make: APC/Emerson/Numeric (Quantity: 1)</b>
	Description: 6KVA Double conversion online UPS with surge protection along with all the accessories and packages
	Input specifications:



	<p>Nominal input voltage: 230 V  Input frequency: 40 - 70 Hz  Input connection Hardwire  Input voltage range: 160 V - 285 V at 100% load. UPS will be de-rated up to 100 Vac below 160 Vac  Input power factor(100% load): 0.98</p> <p>Output specifications:  Output power capacity: 6000 VA  Nominal output voltage: 230 V  Other programmable voltages: 220/240 V  Efficiency at full load: &gt; 94% in online mode, &gt; 98% in green mode  Waveform: Sinewave  Output connection: Hardwire</p> <p>Bypass specifications:  Bypass type: Internal static bypass (automatic and manual), optional external bypass  Bypass input voltage range: 170 - 270 V  Max. bypass current: 40 A  Input protection Circuit breaker</p> <p>Battery Charger:  Supported battery types: Sealed Maintenance Free (SMF) / Valve Regulated Lead  Acid (VRLA) type, Flooded / tubular / vented type  Battery bank voltage: 192 V  Maximum power/current: 1500 W / 6.5 A</p>	
<b>b.</b>	<p><b>Battery Make: Quanta/Excide/Rocket (Quantity: 16)</b></p> <p>12 V 100AH SMF VRLA Batteries along with 10<sup>2</sup> mm wires and battery logs</p>	
<b>c.</b>	<p>Installation:  Including all the electrical wires, casing, fittings and fixing.</p>	

# Annexure-5 (PA Sound Systems)

## Item 5.1: PA Sound System for Meeting room

Make: Ahuja/StudioMaster/Bosch/Philips/ Toshiba

**Components, Quantity & Specification:**

**Component: Cordless Mic set (two cordless microphones)**

**Qty: 1**

**Specification:**

Receiver	Dual Channel Non-Diversity
Frequency response	50Hz-16KHz
Polar Pattern (Hand mic)	Cardioid
Output	Individual Channel: XLR Mix out: ¼" Jack
Power Req. (Hand mic)	2 x 1.5V AA
Receiver	240V AC 50Hz for AC Adaptor Supplied with the set

**Component: Goose neck microphone along with base**

**Qty - 2**

**Specification:**

Frequency Response	20-18,000Hz
Impedance	1000Ω
Sensitivity	7.5mV/Pa
Power Source	1.5V-9V DC
Overall Length	585mm (23")

**Component: Lavalier wireless microphone**

**Qty - 1**

**Specification:**

TRANSMITTER	
RF Output Power	10mW(Max.)
Modulation Mode	FM
Microphone Element	Condenser, cardioid
Frequency Response	100-12,000Hz
Power Requirement	2 X 1.5V Pencil Cells

Current Consumption	<40mA
Controls	On/Off Switch
Indication	Red Ring LED in the gooseneck
Dimensions	W145 X H50 X D155mm
Weight	660g (w/o battery)
<b>RECEIVER</b>	
Audio Output	Balanced 0-50mV
	Unbalanced HI: 0-80mV; LO: 0-25mV
Distortion	<1%
Frequency Response	50-15,000Hz
Power Requirement	220V-240V AC 50Hz for AC adaptor (supplied alongwith)
Controls	Power Switch, HI/LO Switch, Squelch Control, Output Volume Control
Indication	Red LED for Power ON, Yellow LEDs for Diversity, Green LED for Audio Peak
Dimension	W195 X H45 X D150 mm
Weight	700g
Suitable for	PA Applications, cordless mic use in stage & auditorium, seminar halls etc
Warranty	as per manufacturer

**Component: Lectern with Integrated PA system**

**Qty: 1**

**Specification:**

<b>RECEIVER AMPLIFIER</b>	
Power Output	40 Watts Max.
Speaker Impedance (External)	4
Input Channels Sensitivity	Mic-1: 3.0mV Mic-2: 1.8mV Line: 100mV
	Aux Position-1: 100mV Aux Position-2: 180mV
	Aux Position-3: 300mV Position Aux-4: 700mV
Frequency Response	100-16,000Hz
Tone Control	Bass $\hat{A}\pm 6$ dB at 80Hz Treble $\hat{A}\pm 6$ dB at 8kHz
REC. Output	1V (nominal)
Power Supply	AC 220-240V, 50/60Hz
Power Consumption	AC 100W
Dimensions	W420 $\hat{A}$ —H1135 $\hat{A}$ —D580 mm
Weight	18.3kg.
<b>MICROPHONE</b>	
Microphone	Dynamic Unidirectional

RF Carrier Frequency	174.10, 181.90, 190.32, 97.10MHz
Frequency Stability	±0.005%
Spurious Emissions	45dB Max.
RF Output Power	15mW Max.
Frequency Response	50-15,000Hz
Dynamic Range	100dB
Battery	9V
Dimensions	~55~L244 mm
Weight	0.20kg (w/o battery)

**Component: PA Column speaker**

**Qty - 6**

**Specification:**

Input Power	20W RMS, 30W Max.
Power Taps	20/15/10/5W
Voltage	100V
Frequency Response	150-15,000Hz
SPL at 1kHz	93dB/1W/1m
Speakers	4 × 5"×3"
Dimensions	W115 × H658 × D89 mm
Weight	3.39kg

**Component: Mixer Amplifier**

**Qty - 1**

**Specification:**

Power Output	300W Max., 250W RMS at 10% THD, 220W Max., 160W RMS at 10% THD 220W RMS at 5% THD, 200W RMS at 2% THD
Output Regulation	≤ 2 dB, no load to full load at 1kHz
Input Channels	6 × Mic 0.65mV/4.7kΩ, 2 × Aux 100mV/470 kΩ, 1 × Line 1V/50kΩ
Frequency Response	50-15,000Hz ±3dB
Signal to Noise Ratio	60dB
Tone Controls	Bass: ±10dB at 100Hz, Treble: ±10dB at 10kHz
Output	Preamp 200mV/600Ω, Line 1V/1kΩ
Speaker Output	4Ω, 8Ω, 70V & 100V
Digital Player	MP3 Player with USB, SD and MMC Card Reader
Power Supply	AC: 220-240V 50/60Hz DC: 24V (2×12V Car Battery)

Power Consumption	AC: 460VA DC: 6A
Dimensions	W450 × H160 × D340 mm
Weight	16.0kg

**Installation:**

Installation in a room size of 19x49 feet and height 8.6 feet. Must include all the compatible wires, casing, wiring and fixing. Must include all the electrical fittings, wiring and fixing required for installation.

## Item 5.2: PA Sound System for Class room for Career Counselling Cell

Make: Ahuja/StudioMaster/Philips/Bosch/ Toshiba

**Components, Quantity & Specification:**

**Component: Power Amplifier With Speaker**

**Qty: 01**

**Specification:**

Power Output	15W RMS at 10% THD 10W RMS at 1% THD
Output Regulation	≤ 2dB
Input Channels	2 × Mic 1.5mV/4.7kΩ 1 x Aux 100 mV/330kΩ
Frequency Response	120-15,000Hz ±3dB
Signal to Noise Ratio	60dB
Tone Controls	-10dB at 10kHz
Protections	Fuse AC 1A, DC 4A
Power Supply	AC : 220V-240V 50/60Hz DC: 12V (12V Car Battery) and 8×1.5V UM-1 Cells
AC Power Consumption	50VA
Dimensions	W245 x H295 x D175 mm
Weight	5.70kg

**Goose neck microphone along with base**

**Qty - 01**

**Specification:**

Frequency Response	20-18,000Hz
Impedance	1000Ω
Sensitivity	7.5mV/Pa
Power Source	1.5V-9V DC
Overall Length	585mm (23")

**Wireless Microphone Set**

**Qty - 01**

**Specification:**

Description	High quality UHF band frequency duet Wireless Microphone System. One handheld microphone and One Lapalier microphone.
Receiver	Dual Channel Non-Diversity
Frequency response	50Hz-16KHz
Polar Pattern (Hand mic)	Cardioid
Output	Individual Channel: XLR Mix out: ¼" Jack
Power Req. (Hand mic)	2 x 1.5V AA
Receiver	240V AC 50Hz for AC Adaptor Supplied with the set

**Installation:**

**Installation. Must include all the compatible wires, casing, wiring and fixing. Must include all the electrical fittings, wiring and fixing required for installation.**

## **Annexure-6 (Multimedia Projectors)**

### **Item 6.1: Multimedia Projector**

Make: NEC/Epson/Panasonic/Sony

**Qty: 02 ( one for Career & Counselling Cell, one for HRD building)**

**Specification:****POWER DEVICE**

Type: power supply

Nominal Voltage: AC 120/230 V

Frequency Required: 50/60 Hz

Power Consumption Operational: 248 Watt

**INTERFACE PROVIDED**

Connector Type: 15 pin HD D-Sub (HD-15), 19 pin HDMI Type A, 4 pin USB Type A, 4 pin mini-DIN, 9 pin D-Sub (DB-9), RCA, RCA x 2, RJ-45, mini-phone stereo 3.5 mm

**DISPLAY**

Image Brightness: 3000

Image Contrast Ratio: 2000:1

Image Size: 25.2 in - 299 in

Projection Distance: 2 ft - 45 ft

Max Sync Rate (V x H): 120 Hz x 100 kHz

**CHASSIS**

Built-in Devices speaker

**POWER**

Power Consumption Stand by / Sleep 8 Watt

**VIDEO INPUT**

Digital Video Standard: High-Definition Multimedia Interface (HDMI)

Video Modes: 1080i, 1080p, 480i, 480p, 576i, 576p, 720p

Analog Video Format: NTSC, NTSC 4.43, PAL, PAL 60, PAL-M, PAL-N, SECAM

Analog Video Signal: RGB, S-Video, composite video

Video Interfaces: HDMI, S-Video, VGA, composite video

TV System: NTSC, SECAM, PAL, PAL-N, PAL-M, NTSC 4.43, PAL 60

**ENVIRONMENTAL PARAMETERS**

Min Operating Temperature: 41 °F

Max Operating Temperature: 104 °F

Sound Emission (Economic Mode): 27 dB

**OPERATION**

Lamp Type: 180 Watt

Lamp Life Cycle: Up to 5000 hour(s) / up to 6000 ns (economic mode)

Compatibility: Mac, PC

**PROJECTOR**

Class: digital projector

Recommended Use: presentation and multimedia

Type: LCD projector

Portability: portable

Min Image Size: 25.2 in

Max Image Size: 299 in

Native Resolution: 1024 x 768

Max Resolution (Resized): 1600 x 1200

Display Resolution Abbreviation: XGA

Max V-Sync Rate: 120 Hz

Max H-Sync Rate: 100 Hz

Native Aspect Ratio: 4:3

Brightness: 3000

Contrast Ratio: 2000:1

Min Screen Distance: 2 ft

Max Screen Distance: 45 ft

Throw Ratio: 1.3 - 2.2:1

Controls & Adjustments: aspect control, keystone correction

Projector Features: Advanced AccuBlend technology, Auto Vertical Keystone, AutoSense technology, Color Management System, Deep Color, Eco-Mode technology, JPEG photo playback, Micro Lens Array (MLA) Technology, freeze frame, wall color correction

**AUDIO OUTPUT**

Type: speaker(s)

Sound Output Mode: mono

Form Factor: integrated

Output Power / Channel: 10 Watt

**PROJECTOR LENS SYSTEM**

Focus Type: manual

Lens Aperture: f/1.7-2.2

Zoom Factor: 1.7x

Keystone Correction Type: digital

Keystone Correction Direction: vertical

Vertical Keystone Correction: -30 / +30

**SOFTWARE**

Type: Drivers & Utilities

**SERVICE & SUPPORT**

Type 2 years warranty

**CABLES:**

One 15 Mtr VGA cable

One 15 Mtr HDMI Cable

One 15 Mtr Power Cable

**MOUNTING:**

One Ceiling Mounting Kit

**INSTALLATION:**

Installation with all fixings and casings



## Annexure-7 (Silent Generators)

### Item 7.1: 15 KVA Silent Generator ( 3 phase)

Make: Kirloskar/Mahindra/ Honda/ Yamaha

Qty:

Specification:

Prime Rating at rated rpm ( as per ISO8528)		kVA	15
		kW	12
Frequency		Hz	50
Power factor		lagging	0.8
Voltage		V	230 (1Ø) & 415 (3Ø)
Governing class (As per ISO 8528 Part-V)			G2
Noise level		dBA	< 75
Fuel Consumption*	At 100% Load	Ltrs/hr	4
	At 75% Load		3
	At 50% Load		2.2
Fuel tank capacity		Ltrs	65
Weight of genset with canopy (approx..)^	Dry	Kg	900
	Wet	Kg	950
Overall dimensions of genset^	Length	mm	1740
	Width	mm	1050
	Height	mm	1410
Electrical Battery starting voltage		Volts-DC	12
Rated output (Prime Continuous rating as per ISO 8528-1)		KW	15.1
		HP	20.5

No. of cylinder	Number	2
Cubic capacity	Ltrs	1.88
Bore x Stroke	mm	100 x 120
Rated Speed	RPM	1500
Aspiration	NA/TC/TA	NA
Lube Oil change period	Hrs	500
Lube Oil Sump Capacity	Ltrs	5
Coolant Capacity	Ltrs	NA
Insulation Class		Class H
Alternator Efficiency (at 100% load) 0.8 pf**	%	86
Max Voltage Dip at Full Load 0.8 pf Lag	Sec	< 20%

**Installation: With all the electrical fittings, undergrounding(if required), fixtures, cables, casings and consumables.**

## **Item 7.2: 25 KVA Silent Generator (3 phase)**

Make: Kirloskar/Mahindra/ Honda/ Yamaha

**Qty:**

**Specification:**

Prime Rating at rated rpm ( as per ISO8528)1	kVA	25	
	kW	20	
Frequency	Hz	50	
Power factor	lagging	0.8	
Voltage	V	230 (1Ø) & 415 (3Ø)	
Governing class (As per ISO 8528 Part-V)		G2	
Noise level	dBA	< 75	
Fuel Consumption*	At 100% Load	Ltrs/hr	5.8

	At 75% Load		4.4
	At 50% Load		2.9
Fuel tank capacity		Ltrs	65
Weight of genset with canopy (approx..)^	Dry	Kg	1150
	Wet	Kg	1200
Overall dimensions of genset^	Length	mm	2350
	Width	mm	950
	Height	mm	1230
Electrical Battery starting voltage		Volts-DC	12
Rated output (Prime Continuous rating as per ISO 8528-1)	KW		24
	HP		42
No. of cylinder		Number	3
Cubic capacity		Ltrs	3.12
Bore x Stroke		mm	105 x 120
Rated Speed		RPM	1500
Aspiration		NA/TC/TA	TC
Lube Oil change period		Hrs	500
Lube Oil Sump Capacity		Ltrs	8
Coolant Capacity		Ltrs	14.5
Insulation Class			Class H
Alternator Efficiency (at 100% load) 0.8 pf**		%	89
Max Voltage Dip at Full Load 0.8 pf Lag		Sec	< 16%

**Installation: With all the electrical fittings, undergrounding(if required), fixtures, cables, casings and consumables.**

# **Annexure-8 (Retractable Projector Screens)**

## **Item 8.1: 8x6 Retractable Projector Screen**

**Qty: 02 (one for HRD Building, one for Career Counselling Cell)**

**Specification:**

Size: 8x6 ft

Type: Wall & Ceiling Projector Screen

Autolock: Yes

With Installation

## Annexure-9 (White boards)

### **Item 9.1: 6x4 White board**

**Qty: 02 (one for HRD Building, one for Career Counselling Cell)**

**Make: Kores/Sigma**

**Specification:**

Size: 6x4 ft

Type: Non Magnetic

With Installation

## Annexure-10 (CCTV Surveillance System)

### **Item 10.1: CCTV Surveillance System**

**Make: Ahuja/StudioMaster**

***Components, Quantity & Specification:***

**Component: 16 Ch POE NVR With 2 TB HDD**

**Make: HIKVISION/PELCO/BOSCH**

**Qty: 01**

**Specification:**

- Up to 6 Megapixel Resolution Recording
- 160 Mbps Incoming Bandwidth
- Supports H.264+ and H.264
- Synchronous HDMI and VGA Output 1920 × 1080p Resolution
- 16-ch Network Cameras Can Be Connected
- Up to 2 SATA Interfaces
- Plug & Play w/Up to 16 Independent PoE Network Connections
- Supports Network Detection, Including Network Delay, Packet Loss
- Alarm and Audio I/O

**Component: 1 KVA UPS (for NVR)**

**Make Emersson/ Libert/ NUMERIC**

**Qty: 01**

**Component: 4U Network Rack With PDU (for NVR & UPS)**

**Make NETRACK/VALRACK/APW/RITTAL**

**Qty: 01**

**Component: 2 MP Fix Bullet IR IP Camera**

**Make: HIKVISION/PELCO/BOSCH**

**Qty: 03**

**Specification:**

- 1/2.8" Progressive CMOS

- ICR, 0lux with IR, 1920 × 1080:25fps(P)/30fps(N)
- 4mm/F2.0 lens (6/8/12mm optional)
- H.264&MJPEG, IP67, DWDR, 3D DNR, BLC
- IR range: up to 30m, DC12V and PoE (802.3af) \*power supply not included
- Wall-Mounted Bracket Included

**Component: Communication cable CAT6 UTP LHZS 24 AWG**

**Make : AMP/SYSTIMAX/COMSCOPE/PONDUIT**

**Qty: 1 roll**

**Component: 2" PVC casing capping**

**Make : Precisson/ Legrand/MK/Honeywell**

**Qty: 30**

**Installation: Installation with all cabling, underground cabling(if necessary), commissioning sign writing testing and report generation and submission charges**

**Qty: 1 job**

## **Annexure-11 (Split ACs with Stabilizers)**

### **Item 11.1: 2 ton 3 star split AC with Stabilizer**

**Qty: 02 (for Career Counselling Cell) +**  
AC Make: Lloyd/Carrier/Hitachi/Voltas/LG/Samsung  
**Specification:**  
2 ton 3 Star Split AC with Installation

AC Stabilizer Make: V-Guard/Microtek  
**Specification:**  
For 2 ton AC with Installation

### **Item 11.2: 1.5 ton 3 star split AC with Stabilizer**

**Qty: 02 (for Career Counselling Cell) +**  
AC Make: Lloyd/Carrier/Hitachi/Voltas/LG/Samsung  
**Specification:**  
2 ton 3 Star Split AC with Installation

AC Stabilizer Make: V-Guard/Microtek  
**Specification:**  
For 1.5 ton AC with Installation

## **Annexure-12 ( Aqua Guard)**

### **Item 12.1: Aqua guard**

<b>Conformity To Indian Standrad For System</b>	IS:14724( latest)
<b>Output Water Of RO System Conforming</b>	IS:10500( latest)

<b>To Indian Standard</b>	
<b>Input Water TDS</b>	1000 mg/L
<b>Output Capacity</b>	100 L/Hrs
<b>Recovery At 27 °C</b>	30-40 %
<b>Thin-film Composite Membrane.</b>	Yes
<b>Ultraviolet (UV) LAMP</b>	Yes
<b>Ultraviolet (UV)LAMP Wattage</b>	11
<b>Number Of Float Valves/sensors</b>	1
<b>High Pressure Pump</b>	Yes
<b>Raw Water/Chemical Raw Water/Chemical Cleaning PUMP:</b>	Yes
<b>Pre Filter Vessels:</b>	Yes
<b>Micron Filter:</b>	Yes
<b>Membrane Housing:</b>	Yes
<b>Auto Cut:</b>	Yes
<b>No Of Candles</b>	1 Nos



<b>Installation Type</b>	Table Top
<b>Warranty For Free Candle And Activated Carbon Replacement Twice A Year</b>	2 Years
<b>Warranty For Free Replacement Of Machine</b>	2 Years
<b>Antiscalant- Where Silica Is Up To 100 Ppm/where Mica Is Up To 100 Ppm</b>	Yes
<b>Iron Removing Filter Max. 0.3 Ppm</b>	Yes
<b>Chloride &amp; Flouride Removal Pump</b>	Yes
<b>Coolong and storage</b>	80 lits

## **Annexure-13 (Inverter)**

### **Item 13.1: Inverter**

**Rating in KVA & Min. VAH Capacity of Battery**

2 KVA/8640 VAH

**Technology**

IGBT-PWM

**Energy Star Rating**

5 Star

**Trolley**

with trolley

**Type of Battery**

Tubular battery conforming to IS:13369

**Backup time (Minutes)**

Minimum 180 Minutes

**Thickness of sheet for trolley (in mm) minimum**1.2

**Trolley Material**CRCA Steel

**Type of enclosure**CRCA Steel

**Thickness of sheet for enclosure ( in mm) minimum**1.2

**Inverter shall have by pass facility:**Yes

The inverters shall be provided with output voltage and current meters conforming to IS 2419 : 1979 and of an accuracy class not inferior to 2.5 in accordance with IS 1248 : 1983

## **Annexure-14 (Equipments for Dept of Zoology)**

### **Item 14.1: Equipments for Dept of Zoology**

**1, Autoclave:**

Minimum it should have a triple walled construction. The working chamber, steam jacket, outer chamber and the lid should be made of stainless steel. It should have both water inlet and outlet valves. Should have a water level gauge . Should have gauges for measuring inner and outer steam pressure. Size depth 550mm x 350 mm (minimum). Micro processor Controller with Time & Temperature, Temperature, range up to 122.0o C in 0.1oC resolution and a control accuracy of  $\pm 0.5oC$ . Should have automatic pressure control switch, safety valve and eject valve. Should have joint-less silicone gasket. Should have automatic low water protection. Should be supplied along with bins. Should have an ISI mark. Should have 121°C working temperature at 15 to 20 psi pressure. Chamber volume should be approximately 300mm diameter and 500mm depth with minimum 2 bin type. Should be operated in mains 220 – 240 V ac 50 Hz input power supply.

Water inlet and outlet pipe should be provided and connections should be done on a turnkey basis. Should be CE and ISI certified

### **2. Double Distillation Unit with Accessories**

Double Distillation Unit, It should be All Quartz double distillation unit, Demountable Boiler Panel Series, Model – Vertical, Distilled Water Output Capacity – 1.5 Liters / Hour, cooling water consumption less than 50 liters/ hour, Distillate water quality should be free from pyrogen and organic matter, specific conductivity at 25 deg C less than  $0.4 \times 10^{-6}$  S/cm, distillate temperature 65-75°C. Accessories for Double Distillation Unit: Distillation Apparatus power supply (DAPS) for 1.5 ltrs model, Warranty: One year at the minimum from the date of successful installation. Should be CE/ISI certified

### **3. Specification for Hot air oven**

Fully Automatic with automatic inbuilt digital timer (LED / LCD), Corrosive resistant material throughout the body, Double Walled make with stainless steel inner and outer chamber, with stainless steel wire mesh shelves (min 2 shelves) Uniform temperature throughout the chamber, Secured lock system, Sufficient ventilation, 45- 55 lit volume, Minimal heating time, Temperature range : Ambient +5°C to 220°C, Accuracy :  $\pm 1^\circ\text{C}$  or  $\pm 0.5^\circ\text{C}$  (under ideal conditions), Readability : 0.5°C, Power Supply : 220V, Single phase, 50 Hz, AC supply, Digital Temperature Controller with auto start upon reaching set, temperature Indicators of Auto-mode, Sensor failure, Alarm & Heating Alarms and indicators during overshoot or undershoot and in case, the door is not properly shut Min. 3 years warranty Should be CE and ISI certified

### **4. Sterile filtration unit with vacuum pump**

The unit should include both filtration apparatus and vacuum pump. The filtration unit should include Glass filter holder assembly with funnel, fritted base, stopper, clamp, autoclavable, filter diameter 47 mm, funnel capacity 300 mL and filtration flask capacity 1L. Choice may be given for 4L filtration flask capacity. The vacuum pump should run at 220-230 V, Power Output 60 W, Max current 0.32 A, Speed 1450 Rpm, Weight around 5 kg, Port Thread 5/16 inch, Max Vacuum -600 mm Hg, Dimension (LxWxH) should be more or equal to 20 x11 x20 cm.

## **Annexure-15 (Vacuum Cleaners)**

**Item 15.1: Vacuum cleaner ((Wet & Dry Vacuum Cleaners SE 122))**

## **Annexure-16 (Photocopier)**

### **Item 16.1: Photocopier**

Make: Canon/Toshiba/Brother

Type of Machine	Multifunction Machine
Print Technology	Laser
Cartridge Technology	With Separate Drum and Toner
Type of Printing	Colour
Platen/Flatbed Size	A3
Paper Size (Original/Image)	A3/A3/A4
RAM size (MB)	2048
Hard Disk Capacity(GB)	0
Minimum Speed per Minute in A4 Size- Mono (PPM)	20
Minimum Speed per Minute in A4 Size- Colour (PPM)	20

<b>Minimum Speed per Minute in A3 Size-Mono(PPM)</b>	15
<b>Minimum Speed per Minute in A3 Size-Colour(PPM)</b>	15
<b>Scanning Feature Availability</b>	Yes
<b>Duplexing Feature Availability</b>	Yes
<b>Networking Feature Availability</b>	Yes
<b>If yes, Network Interface</b>	Ethernet 10/100/1000
<b>Faxing Feature Availability</b>	No
<b>Speed of Fax, If Fax Feature is available</b>	NA
<b>Original Feed Type</b>	Platen
<b>Feeder Capacity (Number)</b>	0
<b>Wi-Fi Capability</b>	Yes
<b>If yes,Wi-Fi Type</b>	Wi fi 802.11 b/g/n & Wi Fi Direct
<b>Number of Main Tray(Number)</b>	2
<b>Total Main Tray Capacity</b>	1100
<b>Bypass Facility</b>	Yes

<b>Bypass Tray Capacity</b>	100
<b>Yield of the cartridge/Ink Tank/Ink Pack (for C, M, Y &amp; K individually) supplied with Machine(Number of prints)</b>	C-19000, M- 19000, Y-19000, K-36000
<b>Life of Drum in terms of number of Prints in case of Separate Drum and Toner cartridge technology(Number of Prints)</b>	C-54000, M- 54000, Y-54000, K-69000
<b>Duty Cycle/Month (Number of Prints)</b>	77000
<b>BIS Registration under CRS of Meity</b>	Yes
<b>BIS Registration Number</b>	R-41001252
<b>Operating Temperature Range (Degree C)</b>	30 degree Celsius
<b>Operating Humidity (%RH)</b>	20
<b>On Site OEM Warranty (Year)</b>	1

## **Annexure-17 (Smartboard)**

**Item 17.1: Smartboard**

## **Annexure-18 (Refrigerator)**

**Item 18.1:Regrigerator-200 Lit.**

Make: Samsung/LG/ Haier