

**Request for Proposal (RFP) Document
for**

**Procurement of Machine & Equipment for Mechanical, Pharmacy & Super I-way Lab,
furniture for library and conference room and Books for the Library.**

NIT No. 02/2018-19/DST/MIT-M

Dated:22ndDecember 2018

Mode of Bid Submission	e-Bid
Procuring Authority	Principal, MIT, Muzaffarpur
Last Date & Time of Submission of Bid	15 th January 2019
Date & Time of Opening of Technical Bid	17 th January 2019

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ABBREVIATIONS & DEFINITIONS

Act	Public Procurement Act, 2012 and Rules thereto
Authorized Signatory	The bidder's representative/ officer vested (explicitly, implicitly, or through conduct) with the powers to commit the authorizing organization to a binding agreement. Also called signing officer/ authority having the Power of Attorney (PoA) from the competent authority of the respective Bidding firm.
BG	Bank Guarantee
Bid/ e Bid	A formal offer made in pursuance of an invitation by a procuring entity and includes any tender, proposal or quotation in electronic format
Bid Security	A security provided to the procuring entity by a bidder for securing the fulfilment of any obligation in terms of the provisions of the bidding documents. Also called as EMD.
Bidder	Any person/ firm/ agency/ company/ contractor/ supplier/ vendor participating in the procurement/ bidding process with the procurement entity
Bidding Document	Documents issued by the procuring entity, including any amendments thereto, that set out the terms and conditions of the given procurement and includes the invitation to bid
BoM	Bill of Material
Competent Authority	An authority or officer to whom the relevant administrative or financial powers have been delegated for taking decision in a matter relating to procurement.
Contract/ Procurement Contract	A contract entered into between the procuring entity and a successful bidder concerning the subject matter of procurement.
EMD	Earnest Money Deposit. Also, called as Bid Security.

INR	Indian Rupee
ISO	International Organization for Standardization
ITB	Instruction to Bidders
PAN	Permanent Account Number
PBG	Performance Bank Guarantee
PC	Procurement/ Purchase Committee
PQ	Pre-Qualification
Procurement Process	The process of procurement extending from the issue of invitation to Bid till the award of the procurement contract or cancellation of the procurement process.
Procurement/ Public Procurement	The acquisition by purchase, lease, license or otherwise of works, goods or services, including award of Public Private Partnership projects, by a procuring entity whether directly or through an agency with which a contract for procurement services is entered into, but does not include any acquisition without consideration, and “procure” or “procured” shall be construed accordingly
TIN	Tax Identification Number
GST	Goods & Service Tax

Department of Science and Technology

Muzaffarpur Institute of Technology, Muzaffarpur, Bihar, India. Pin - 842003

1. NOTICE INVITIG e-TENDER

(Through e-Procurement mode only over
<https://www.eproc.bihar.gov.in>)

Tender Notice No:02/2018-19/DST/MIT-M

Date: 22/12/2018

Muzaffarpur Institute of Technology invites under two bid systems from reputed organizations/companies by this Department for Procurement of Machine & Equipment for Mechanical, Pharmacy & Super I-way Lab, furniture for library and conference room and publisher/distributors/registered suppliers for Books for the Library at MIT Muzaffarpur.

SL No.	Scope of work	Cost of tender document (In Rupees) (inclusive of GST @18.00%) to be paid through e-payment mode (i.e. NEFT/RTGS/ Credit Card/Debit card)	Tender processing Fee (Non-Refundable) (In Rupees) (inclusive of GST @18.00%) to be paid through e-payment mode (i.e. NEFT / RTGS / Credit Card / Debit card)	Earnest Money Deposit (In Rupees)
1	2	5	6	7
01.	Supply, Installation, Testing, Commissioning, Training & Maintenance of Machinery and equipment of Advanced Manufacturing Practice Lab under Mechanical Department at MIT Muzaffarpur	Rs. 1,000.00	Rs. 1,180	Rs. 20,000.00
02	Supply, Installation, Testing, Commissioning, Training & Maintenance of Tribology Lab under Mechanical Department at MIT Muzaffarpur	Rs. 1,000.00	Rs. 1,180	Rs. 14,000.00
03	Supply, Installation, Testing, Commissioning, Training & Maintenance of Computational Fluid flow Lab & Computational Heat Transfer Lab under Mechanical Department at MIT Muzaffarpur	Rs. 1,000	Rs. 1,180	Rs. 40,000.00 (Revised)
04	Supply, Installation, Testing, Commissioning, Training & Maintenance of Super I-way Lab at MIT Muzaffarpur	Rs. 1,000	Rs. 1,180	Rs. 40,000.00
05	Supply of Books for MTech & BTech for Library at MIT Muzaffarpur	Rs. 1,000	Rs. 1,180	Rs. 40,000.00
06	Supply, Installation, Testing, Commissioning, Training & Maintenance of Pharmacology Lab of Pharmacy Department at MIT Muzaffarpur	Rs. 1,000	Rs. 1,180	Rs. 9,500.00
07	Supply, Installation, Testing, Commissioning, Training & Maintenance of Pharmacognosy Lab of Pharmacy Department at MIT Muzaffarpur	Rs. 1,000	Rs. 1,180	Rs. 23,500.00

08	Supply, Installation, Testing, Commissioning, Training & Maintenance of Pharmaceutical Chemistry Lab of Pharmacy Department at MIT Muzaffarpur	Rs. 1,000	Rs. 1,180	Rs. 19,500
09	Supply, Installation, Testing, Commissioning, Training & Maintenance of Pharmaceutics Lab of Pharmacy Department at MIT Muzaffarpur	Rs. 1,000	Rs. 1,180	Rs. 18,500
10	Supply, Installation, Testing, Commissioning, Training & Maintenance of Pharmaceutical Biotechnology Lab of Pharmacy Department at MIT Muzaffarpur	Rs. 1,000	Rs. 1,180	Rs. 23,000
11	Supply, Installation, Testing, Commissioning, Training & Maintenance of Central Instrumentation Lab of Pharmacy Department at MIT Muzaffarpur	Rs. 1,000	Rs. 1,180	Rs. 50,000
12	Supply of Godrej/ Promark/ Standard company Chair for library	Rs. 1,000	Rs. 1,180	Rs. 2,200
13	Supply of revolving chair, visitor chair, office table, office chair, conference table and conference mic system for conference room at MIT Muzaffarpur	Rs. 1000	Rs. 1,180	Rs. 41,500

Tender Schedule/Programme:

Sl. No.	Activity	Date/Time :Duration
1.	Online Sale/Download date of Tender documents	From 25-12-2018 to 15-01-2019 (14:00 Hrs.)(https://www.eproc.bihar.gov.in)
2.	Bid Clarification Date/Time (Through email)	All the queries can be sent by mail Up to 04-01-2019, 15.00 Hrs at mohitkumar@mitmuzaffarpur.org
3.	Date/Time for submission/ uploading of offer/Bid	15-01-2019 Up to 15.00 Hrs.(https://www.eproc.bihar.gov.in)
4.	Submission of EMD in Hard copy/Original	Before the time of opening of technical bid (Muzaffarpur Institute of Technology, Muzaffarpur, Bihar, India. Pin – 842003)
5.	Date & time for opening of Technical Bid	17-01-2019/ 15.00 Hrs.(https://www.eproc.bihar.gov.in)
6	Contact person/Nodal Officer for queries	Mr. Mohit Kumar, G-05, Assistant Professor, Department of ECE, MIT Muzaffarpur. mohitkumar@mitmuzaffarpur.org 8984565472
7.	Financial Bid Opening Date and Time	Date to be announced later by competent authority.

- Detailed descriptions of the item and instructions for submitting your offer can be downloaded from e-Procurement Portal (<https://www.eproc.bihar.gov.in>).
- Tender Fee/Cost has to be paid online during requesting of the tender through e-Procurement Portal (<https://www.eproc.bihar.gov.in>).
- Tender Processing Fee (TPF) amount to be paid through e-Payment mode (i.e. NEFT, Internet Banking, Credit / Debit Card) only.
- Bids along with necessary online payments (Tender Processing Fee) must be submitted through e-Procurement Portal (<https://www.eproc.bihar.gov.in>) before the date and time specified in the NIT/RFP. The department/Tendering Authority doesn't take any responsibility for the delay / Non Submission of Tender / Non Reconciliation of online Payment caused due to Non availability of Internet Connection, Network Traffic/ Holidays or any other reason."
- The bidders shall submit their eligibility and qualification details, Certificates as mentioned in section etc., in the online standard formats given in e-Procurement Portal (<https://www.eproc.bihar.gov.in>) at the respective stage only.
- The bidders shall upload the scanned copies of all the relevant certificates, documents etc., in support of their eligibility criteria / technical bids and other certificate /documents in the e-Procurement Portal (<https://www.eproc.bihar.gov.in>).
- The bidder shall digitally sign on the supporting statements, documents, certificates, uploaded by him, owning responsibility for their correctness/authenticity. The bidder shall attach all the required documents for the specific tender after uploading the same during the bid submission as per the tender notice and bid document.
- For support related to e-tendering process, bidders may contact at following address "e-Procurement HELP DESK First Floor, M/22, Bank of India Building, Road No-25, Sri Krishna Nagar, Patna- 800001. Ph. No: **0612-2523006**, Mob- **7542028164**" or may visit the link "Vendor Info" at (<https://www.eproc.bihar.gov.in>).
- **Corrigendum/ Addendum**, if any, will be published on the e-Procurement, Bihar <https://www.eproc.bihar.gov.in> itself.

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e-Procurement Standing Instruction

1. **Muzaffarpur Institute of Technology**, invites under two bid system **Technical and Financial** from reputed **organizations/companies** for Procurement of Machine & Equipment for Mechanical, Pharmacy & Super I-way Lab, furniture for library and conference room and publisher/distributors/registered suppliers for Books for the Library at MIT Muzaffarpur.
2. The bidder must have Class II Digital Signature Certificate (DSC) and e-Tendering User-id of the e-Procurement website (<https://www.eproc.bihar.gov.in>) for submission of e-Bid.
3. The payment of Tender Processing Fee needs to be paid through e-Payment mode only.
4. Bids along with necessary online payments must be submitted through e-Procurement Portal (<https://www.eproc.bihar.gov.in>) before the date and time specified in the NIT / RFP. The department / Tendering Authority don't take any responsibility for the delay / Non Submission of Tender / Non Reconciliation of online Payment caused due to Non availability of Internet Connection, Network Traffic / Holidays or any other reason.
6. The bidders shall upload the scanned copies of all the relevant certificates, documents etc., in support of their eligibility criteria / technical bids and other certificate / documents in the e-Procurement Portal (<https://www.eproc.bihar.gov.in>) only.
7. The bidder shall digitally sign the supporting documents / certificates, uploaded by him, owning responsibility for their correctness / authenticity. The bidder shall attach all the required documents for the specific tender after uploading the same during the bid submission as per the tender notice and bid document.
8. The Financial Bid of the successful bidders shall be opened on a suitable date, which will be duly informed later on. The Technical Bid and Financial Bid needs to be filled, uploaded and submitted through e-Procurement Portal www.eproc.bihar.gov.in on or before **15-01-2019 by 15.00 hrs.**
9. The authority reserves the right to reject or cancel the tender or any part thereof without assigning any reasons thereof.
10. Corrigendum/ Addendum, if any, will be published on e-Procurement, Bihar <https://www.eproc.bihar.gov.in> itself.
11. Bidders are advised to keep updated their e-Procurement profile with correct / valid email id as all important activity / events emailed to their registered email as per e-Procurement Portal.



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INVITATION FOR BID (IFB) & NOTICE INVITING BID (NIB)

Name & Address of the Procuring Entity	Muzaffarpur Institute of Technology, Muzaffarpur, Bihar, India. Pin – 842003.
Name & Address of the Project Officer In- charge (POIC)	Mohit Kumar, G-05, Department of Electronics and Communication, MIT Muzaffarpur Email: mohitkumar@mitmuzaffarpur.org Contact no. 8984565472
Subject Matter of Procurement	Procurement of Machine & Equipment for Mechanical, Pharmacy & Super I-way Lab, furniture for library and conference room and publisher/distributors/registered suppliers for Books for the Library at MIT Muzaffarpur.
Bid Procedure	Two Bid Open Tender
Bid Evaluation Criteria (Selection Method)	Least Cost Based Selection (LCBS) - L1
Websites for downloading Bidding Document, Corrigendum's, Addendums etc.	https://www.eproc.bihar.gov.in/BELTRON
Bid Security and Mode of Payment	As mentioned in NIT, separate for separate Scope of Work in Demand Draft in favor of “Principal, Muzaffarpur Institute of Technology, Muzaffarpur,” payable at “Muzaffarpur”
Period of Sale of Bidding Document (Start Date)	25 - 12- 2018
End Date for the submission of Bids	15-01-2019
Submission of Demand Draft for Bid Security	17-01-2019
Date/ Time/ of Technical Bid Opening	17-01-2019/ 03:00 PM
Date/ Time/ of Financial Bid Opening	To be notified later
Bid Validity	180 Days

Note:

- 1) Bidder (authorized signatory) shall submit their offer on-line in Electronic formats both for technical and financial proposal.
- 2) In case, any of the bidders fails to physically submit the Demand Draft for EMD, up to 03:00 PM on **17th January 2019**, its Bid shall not be accepted. The Demand Draft for Bid Security should be drawn in favor of "Principal, Muzaffarpur Institute of Technology, Muzaffarpur," payable at "Muzaffarpur" from any Scheduled Commercial Bank.
- 3) To participate in online bidding process, Bidders must procure a Digital Signature Certificate (Type III / II) as per Information Technology Act-2000 using which they can digitally sign their electronic bids. Bidders can procure the same from any CCA approved certifying agency, i.e. TCS, Safecrypt, Ncode etc. Bidders who already have a valid Digital Signature Certificate (DSC) need not procure a new DSC.
- 4) The authorities will not be responsible for delay in online submission due to any reason. For this, bidders are requested to upload the complete bid well advance in time so as to avoid issues like slow speed; choking of web site due to heavy load or any other unforeseen problems at the last moment.
- 5) The procuring entity reserves the complete right to cancel the bid process and reject any or all of the Bids.
- 6) No contractual obligation whatsoever shall arise from the bidding document/ bidding process unless and until a formal contract is signed and executed between the procuring entity and the successful bidder.



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2. TECHNICAL BID

A. Please note the following terms and conditions for machine & equipment for mechanical, pharmacy & super i-way lab, furniture for library and conference room

1. Only Original Equipment Manufacturer/ Authorized Dealer can participate: Name of the manufacturer/Mark/Brand should be mentioned in each item or equipment.
2. Similar experience of supplying instruments for 02 terms / years at renowned polytechnics/Engineering college/IITs/ NITs/Universities of repute/ Govt. depts./ PSUS, abroad will be preferred.
3. The tender must include complete detailed specifications supported by printed Literature of the equipment.
4. The rate quoted should be F.O.R to destination inclusive of all taxes, installation, commissioning and successful demonstration of the equipment supplied (wherever applicable)
5. After installation and commissioning the equipment/ software the supplier is required to impart necessary training, if any, then only the agreed payment will be released.
6. Any request for alternation / correction in the specification and price in the tender document will not be entertained, once submitted.
7. Payment will be released only after delivery, verification of quality, specification and successful installation, demonstration and training on equipment and software at institute.
8. If any kind of defect in equipment/ machine or deviation from the specification are detected and reported, the supplier should replace or rectify the defect immediately.
9. **Muzaffarpur Institute of Technology, Muzaffarpur** reserves the rights to select entire or the part items of the particular package on recommendation of the purchase committee.
10. The rate quoted in the tender should be valid for 180 days from the date of opening of the tender. The price will be same without variation of any kind.
11. **Muzaffarpur Institute of Technology, Muzaffarpur** reserves the rights to accept the lowest or any tender and of rejecting all or any tender without assigning any reason for the same.
12. Request for the supply of any substitute for any items or equipment other than mentioned in the tender, will not be entertained.
13. The entire dispute with regard to the contract of purchase of equipment etc. will be subject to Legal jurisdiction of Muzaffarpur only.
14. Manufacture of the equipment will be required to furnish a certificate to the effect that they are manufacture of such and such make and whereas Dealers will have to furnish a certificate issued by the manufacture certifying that M/S such & such in the dealer under brand name equipment. Without this certificate the tender will not be accepted.
15. The company should have the following conditions:
 - I. Audit balance sheet for at least last two financial years and the turn over should be at least thrice the total quoted price and there should be sufficient annual turnover.
 - II. Income tax return in name of organization/firm for last two Financial Assessment yours.
 - III. Company PAN No.
 - IV. Copy of GST Registration Certificate & Latest Paid Challan.

- V. Copy of authorization letter from original manufacturers.
 - VI. Technical Literatures and specifications of all the products being quoted.
 - VII. An judicial affidavit regarding that the firm is not blacklisted by state Government/Central Government.
16. The tender should bear all the transportation & insurance risk till delivery point.
 17. The tender should submit Manufacture issued Dealership certificate if he is dealer and in case Manufacturer himself is bidding, he should enclose proof of being manufacturer.
 18. **Muzaffarpur Institute of Technology, Muzaffarpur** will have right to add/ alter any terms and conditions as per existing financial/ treasury rules and provisions applicable in the Bihar state if it has not been include/ addressed in the terms and conditions
 19. Materials having ISI/ISO/Engineering Marks will be accepted.
 20. Purchase committee reserves the right to change the terms & condition for Machine & Equipment for Mechanical, Pharmacy & Super I-way Lab, furniture for library and conference room.

B. Please note the following terms and conditions for submitting Tender for Books

1. Only Publisher or Distributor Dealer or Registered Supplier can quote.
2. If authorised distributor or dealer is quoting, then Publisher authorization Certificate is required.
3. No. advance payment will be made; payment will be made only after proper Verification of the required items.
4. Delivery of all items will be accepted at destination.
5. Firm must attach copy of PAN No. GOC membership copy, registration Certificate, Income Tax clearance certificate, Sales Tax/VAT/GST certificate.
6. Firm must have the experience of supplying books to technical institutes for past three years.
7. Maximum library discount should be offered but should not be less than approved by GOC.
8. Current conversion rates as per approved rate GOC must be applied
9. Price list/ Catalogue/Price proof should be enclosed for the verification of price.
10. Packing Forwarding, Freight, free of cost up to library
11. Payment after delivery of goods.
12. Books should be of latest edition only.
13. Any loss or damage caused to the books/documents during transit has to be replaced within a reasonable time.
14. It is not necessary that all the books mentioned in list will be purchased, some books may be included if required by the institute.
15. Postal or courier delay will not be considered.
16. All Disputes regarding this apply will be subject to site Jurisdiction.
17. The Undersigned reserve the right to reject any or all the tenders without assigning any reason.

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3. FINANCIAL BID

PACKAGE 1: Advanced Manufacturing Practice Lab

S No.	Product	Quantity	Specification	Price
1	Ultrasonic Metal Welding Machine	1	Automatic & Semi automatic ultrasonic welding machine: 2000 watt, 15/20 KHz, power input: 220-240V, 50/60HZ. Suitable for spot weld, Surface weld of different type of materials.	
2	3D Printing Machine	1	Build Volume: left or right nozzle – 215x215x300mm, layer resolution: 0.25mm nozzle: 150-60micron, Build plate: 20°C to 100°C. Print technology: Fused filament fabrication (FFF), Build speed: <24 mm ³ /s, Print head travel speed: 30 to 300 mm/s, XYZ resolution: 12.5,12.5,2.5 micron, nozzle temperature: `180°C to 280°C, nozzle heat up time: <2 minutes, build plate heat up time: < 4 minutes, open filament system, 2.85 mm filament diameter, Supported materials: Nylon, ABS, PVA, CPE, PC, Software supported on Window XP, 7,8,10, Linux. Plugin integration: Solidworks, autodesk inventor, Siemens NX. Supported files: GIF, JPG, PNG, BMP, 3MF, X3D, OBJ. Connectivity: Wifi, LAN or USB. Input: 100-240V, 50-60Hz,	
3	Electro-chemical machine	1	Machining Cell: Tool area: 30mm ² , Cross head stroke: 150mm, job holder – 100 mm opening *50 mm depth*100 mm width. Tool feed motor – DC Servo motor type. Control Panel:Electrical output rating: 0-300 Amps. DC at any voltage from 0-20V. Efficiency better than 80%, Power factor > 85%, Protection over overload, Short cicuit, and single phase. Operation mode: manual & automatic. Tool feed: 0.2 to 2 mm/min. Z axis control – forward, reverse, auto forward/reverse through micro controller. Supply: 415V, 3 phase AC 50Hz Electrolyte Circulation: Components in tank should be made of corrosion resistant material as well as pump also.	


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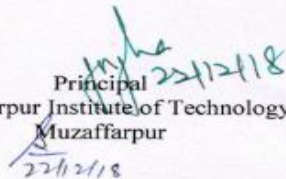
PACKAGE 2: Tribology Lab

S No.	Product	Quantity	Specification	Price
1	Pin on Disc Friction and wear Testing Machine as ASTM G 99 MAKE: MAGNUM	1	Normal load range-up to 200 N, frictional force range-up to 200N with a resolution of 1 N with trace facility, Wear measurement range-+-2000 µm, sliding speed-0.26-10 m/s, disc speed-0-2000 rpm, preset timer range-up to 99 hours, 59 min and 59 sec, wear disc diameter-165 mm, wear disc track dia-10-140 mm, specimen pin diameter/diagonal dia-3mm to 12 mm, pin length-25-30 mm	
ACCESSORIES				
a)	Data Acquisition System	1	Real time data acquisition of friction, wear, temp. which can be analyzed and comparing with different test materials	
b)	Pin Heating System	1	Up to 250°C	
c)	Lubricant Recirculation System	1	Tank capacity-3 litres, flow rates-0-1 litres/min, viscosity range-90 SAE max, temperature-ambient-60 °C max	
d)	Environmental chamber	1	With view port for inert gases and steam	
e)	Specimen Holders (Ball, Square , Rectangular)	1	Each one number	
f)	Wear disc (165mm , 8mm thickness (EN 31 Disc 58-60 HRC)	1	EN31Mtrl, 58-60 HRC	


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PACKAGE 3: Computational Fluid flow Lab & Computational Heat Transfer Lab

S No.	Product	Quantity	Specification	Price
1	ANSYS	20 user	ANSYS 19 version	
2	MATLAB	20 user	MATLAB 9.5 version	
3	Computer,	40	Intel® Core™ i7, 8700 Processor with Intel® HD Graphics 630(3.6 GHz, up to 4.2 GHz with Intel®Turbo Boost, 8MB Cache, 4 cores)Preloaded Win 10 Pro 64 Bit, 8 GB, DDR 4-2400 SDRAM(1 X 8 GB), NVIDIA GeForce®GT 730(2GB), 1 TB 7200 rpm SATA, DVD-W/R 18.5 Inch Monitor, Optical Mouse, Keyboard Intel Ethernet I210-T1 PCIe x 1 USB Type-C™; 2 USB 3.1 Gen 1; 1 Headset connector 2 full height PCIe1; 2 full-heigfht PCIe x 16 one wired as x4; 1 M.2 2230 for optional wireless NIC, 1 M.2 2280 for storage drivers, 1RJ-45; USB 2.0; 1 audio in; audio out; 4 usb 3.1 Gen 1; 2 display Port™ ; VGA.	
4	Online ups 10 kva isolated transformer, 100 AH battery	2	GENERIC-Rating in KVA (KVA)-10.0 KVA, Technology-IGBT-PWM with inbuilt isolation Input Power-single phase 160V - 260V,Output power- Single phase 230V +/- 1% sine wave 50 Hz, Backup time (Minutes)-90,Minimum VAH (VAH)-24000.02,Warranty for UPS (Years)-2,Movable trolley for Batteries-With, Warranty for battery-2,Degree of Protection-IP21,Cabling 5 meters for input and output-With, Paralleling kit for synchronising-With, Installation and Commissioning-Yes, Minimum thickness of M. S. Sheet Enclosure duly painted (mm)-1.2,CONSTRUCTIONAL-Type of Battery-SMF-VRLA conforming to, FUNCTIONAL-Maximum overshoot and Under shoot of output rated voltage-4,Voltage Regulation -< / = 3%,20% Overload limit for minimum 10 minutes-Yes, Overall Efficiency (%)> /=90%,Total Harmonic Distortion(THD) (%)>-Maximum 3%,50% Overload limit for minimum 1 minutes-Yes, PROTECTION-Protection for under voltage at battery terminal at 10.5V per 12 V-Yes, Protection of Over voltage, Short Circuit& over load at UPS output -Yes, METERING AND INDICATIONS-Digital Metering in UPS for AC Input Voltage Output AC Voltage, Current, Frequency, Battery, Voltage and Current-Yes, Indicators for mains presence, Battery charging and discharging, Output Over Load, Low Battery Voltage-Yes	


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PACKAGE 4: Super I-way Lab

S No.	Product	Quantity	Specification	Price
1	Manageable Switch 48,10/100/1000 Mbps ports	4	Forty-eight 10/100/1000 Ethernet ports, Four mini Gigabit Interface Converter (mini-GBIC) slots (shared with four Ethernet ports) for fiber Gigabit Ethernet expansion, Dual images for resilient firmware upgrades, 96-Gbps nonblocking, store-and-forward switching capacity. Simplified QoS management using 802.1p, differentiated services (DiffServ), or type of service (ToS) traffic prioritization. Power redundancy when used with the Cisco RPS1000 380W Redundant Power Supply Unit. Fully resilient stacking provides optimized growth with simplified management. ACLs for granular security and QoS implementation. Configuration and monitoring from a standard web browser. Secure remote management of the switch via Secure Shell (SSH) and SSL encryption. 802.1Q-based VLANs enable segmentation of networks for improved performance and security. Private VLAN Edge (PVE) simplifies network isolation of guest connections or autonomous networks. Automatic configuration of VLANs across multiple switches through Generic VLAN Registration Protocol (GVRP) and Generic Attribute Registration Protocol (GARP). User/network port-level security via 802.1X authentication and MAC-based filtering. Increased bandwidth and added link redundancy with Link Aggregation Control Protocol (LACP). Enhanced rate-limiting capabilities, including back pressure and multicast, broadcast, and flood control. Port mirroring for noninvasive monitoring of switch traffic. Jumbo frame support up to 10 KB. Simple Network Management Protocol (SNMP) versions 1, 2c, and 3 and Remote Monitoring (RMON) support. Fully rack mountable using included rack-mounting hardware. Mac table Size: 8000. 256 active VLANs (4096 range). Port-based and 802.1Q tag-based VLANs, protocol-based VLAN, management VLAN, multicast TV VLAN, PVE, GVRP. HOL blocking prevention.	
2	UPS-10 KVA with Battery and stand ,Back up 90 Min.	3	Product Specification for UPS 10 KVA,Specification Sub-Spec Value ,GENERIC,Rating in KVA (KVA)-10.0 KVA,Technology -IGBT-PWM with inbuilt isolation transformer,Input Power- single phase 160V - 260V sinewave,50Hz , Output power- Single phase 230V +/-1% sinewave 50 Hz , Backup time (Minutes)- 90, Minimum VAH (VAH)- 24000, Warranty for UPS	

			<p>(Years) – 2, (CONSTRUCTIONAL), Movable trolley for Batteries-With, Warranty for battery-2, Degree of Protection- IP21, Cabling 5 meters for input and output-With, Paralleling kit for synchronizing-With, Installation and Commissioning-Yes, CONSTRUCTIONAL ,Minimum thickness of M.S.Sheet Enclosure duly painted (mm)-1.2, Type of Battery-SMF-VRLA conforming to JISC:8702(Pt.I,II&III), FUNCTIONAL, Maximum overshoot and Under shoot of output rated voltage-4, Voltage Regulation from no load to full load (%)-< / = 3%, 20% Overload limit for minimum 10 minutes-Yes, Overall Efficiency (%)->/=90%, Total Harmonic Distortion(THD) (%)-Maximum 3%, 50% Overload limit for minimum 1 minutes-Yes, PROTECTION, Protection for under voltage at battery terminal at 10.5V per 12 V battery-Yes, Protection of Over voltage,Short Circuit & over load at UPS output terminal- Yes. METERING AND INDICATIONS, Digital Metering in UPS for AC Input Voltage,Output AC Voltage,Current,Frequency,Battery Voltage and Current-Yes, Indicators for mains presence,Battery charging and discharging,Output Over Load, Low Battery Voltage- Yes.</p>	
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Principal
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Muzaffarpur
22/12/18

PACKAGE 5: Books for MTech & BTech

S.No	Book Name	Author Name	Publication	Quantity	Price
1.	'A course in electrical circuit analysis'	'Soni, Bhatnagar & Gupta'	'DHANPAT'	10	
2.	'A course in Electrical Machine Design '	'Sawhney A.K'	'Dhanpat Rai & Co'	5	
3.	'A Course in Electrical Power System'	'Soni, Bhatnagar & Gupta'	'DHANPAT'	5	
4.	'A course of electrical power '	'Soni/Bhatnagar/Gupta'	'Dhanpat'	5	
5.	'Advance electrical drive: analysis control & modling'	'Mohan,n'		5	
6.	'Advance Microprocessor '	'B.Ram'	'DHANPAT RAI'	5	
7.	'Analysis of electric machinery and drive systems'	'Paul C. Krause'	'Oleg wasynczuk'	4	
8.	'Analysis of Linear System '	'D.K Cheng'	'Narosa pub. House'	5	
9.	'Automatic Control System'	'B.C. Kuo'	'PHI.'	5	
10.	'Automatic control system'	'Saeed'	's.k.K.'	5	
11.	'Conrol systems'	'Ashfaq Hussain'	'Dhanpat Rai & Co'	5	
12.	Control system engineering'	'Nise,N.S'		5	
13.	'Control System'	'Manke'		5	
14.	'Control system engineering'	'Norman Nice'	'WILEY'	5	
15.	'Control system engineering'	'Nagrtath/Gopal'	'New age'	8	
16.	'Control System Principal & Design'	'M. Gopal'	'TMH'	10	
17.	'Design with PIC Micro controllers '	'John B.Peatman'	'Pearson.'	2	
18.	'Direct Current Machine '	'E.W.Daws'		5	
19.	'Elective power system'	'Soni/Bhatnagar/Gupta'		5	
20.	'Elective power system'	'C.L.wAdhwa'	'New age'	5	
21.	'Electric Energy System Theory '	'O.I. Elgerd'	'TMH'	3	
22.	'Electrical and electronic measurement and instrumentation'	'Sawhney A.K'	'Dhanpat'	5	
23.	'Electrical machine'	'Nagrath I.J. and Kothari '	'TMH'	5	
24.	'Electrical Machine '	'P.S Bimbra'	'Khanna '	10	
25.	Electric Machines '	Ashfaq Hussain & Haroon Ashfaq'	Dhanpat Rai & Co.'	10	
26.	'Electrical power generation & distribution '	'S.N. Singh'	'PHI'	10	
27.	'Electrical Power System '	'Ashfaq Hussain'	'CBS Publishers'	10	
28.	'Electrical Power System '	'C.L.wAdhwa'	'Wiley Eastern'	10	
29.	'Electromagnetic field theory'	'Saidiku'	'Oxford'	5	
30.	'Engineering Electromagnetics '	'W.H.Hyat'	'TMH.'	3	
31.	'ESE question bank'			5	
32.	'Fundamental of Electric Drives '	'G.K Dubey. '	'NPH'	10	

33.	'Fundamental of Microprocessor & Microcomputer '	'B.Ram'	'DHANPAT RAI'	10	
34.	'Fundamentals of Electrical Engg'	'Hussain,A.'	'Dhanpat Rai & Co'	10	
35.	'Gate Question Bank(Electrical Engineering)'			10	
36.	'High Voltage Engineering'	'M.S. du &V.Kamaraju'	'TMH'	10	
37.	'High Voltage Test Technique '	'Kind &Fese'	'SBA Publication'	2	
38.	'Introduction to Matlab'	'Etter,D.M.'		5	
39.	'Linear system analysis'	'Cheng'	'Narosa'	5	
40.	'Modern Control'	'K.Ogata'	'Pearson'	5	
41.	'Modern power system'	'nagrath/Kothari'	'TMH'	10	
42.	'Networks and Systems '	'Ashfaq Hussain'	'Khanna Publication'	10	
43.	'Networks and Systems '	'D Roy Choudhury'	'New Age International'	10	
44.	'Non- Conventional energy resources'	'Khan,B.H.'	'TMH'	4	
45.	'Power Electronics'	'Rashid'	'PHI'	10	
46.	'Power electronics'	'Bimbhra,P.S.'		10	
47.	'Power Electronics '	'Ned Mohan'	'John Wiley & Sons'	3	
48.	'Power system Analysis '	'stevemspm/Grain ger'		5	
49.	'Power System Control & Stability '	'P. Kundur'	'TMH'	5	
50.	'Power System Planning '	'R. L. Sullivan'		2	
51.	'Power System Protection & switch Gear '	'B.Ram& D.N Vishwakarma'	'TMH'	2	
52.	'Power System Protection & Switch Gear '	'Ravindranath&Ch ande'	'New Age Publications'	2	
53.	'Power System Reliability Evaluation '	'Roy Billington'		2	
54.	'Programming and Customizing the 8051 Microcontroller '	'Predko'	'TMH'	2	
55.	'Signals and systems'	'Rawat,t.'	'Oxford'	10	
56.	'Solar PV: Fundamenalstechnolgy& Application'	'Solanki,G.S.'		10	
57.	'Switch gear and Protection '	'Sunil S.Rao'	'Khanna Publication'	8	
58.	'Switch gear and Protection '	'Haroon Ashfaq'	Khanna Publication	6	
59.	'The Performance & Design of Direct Current Machines'	'Hancock N.N'	'CBS Publishers '	3	
60.	'Utilization of Electric Power '	'C.L.Wadhwa'	'NEWAGE'	10	
61.	basic electrical engg.	J.B.Gupta	Khanna Publication	10	
62.	high voltage	c.l.wadha	new age	10	
63.	'A VHDL Primer'	'Bhasker'	'Apprentice Hall'	2	
64.	'Antenna Theory and Practice'	'Chatterjee, R.'	'New Age'	2	

65.	'Basic principles- semiconductor physics and devices '	Neamen, '	'TMH'	4	
66.	'Basic VLSI Design '	'Pucknell and Eshraghian'	'PHI'	2	
67.	'Biomedical Instrumentation'	'Dr. M. Arumugham'		1	
68.	'Biomedical Instrumentation & Measurements'	'Cromwell.'	'PE'	1	
69.	Electronics Devices and circuits	Millman Halkias	McGraw Hill	8	
70.	Integrated Electronics	Millman Halkias	McGraw Hill	8	
71.	'Communication system '	'Haykin'	'WILEY'	10	
72.	'Computer networking '	'Tenenbaum'	'Pearson.'	5	
73.	'Data communication and networking '	'Forouzan'	'TMH'	8	
74.	'Digital Image Processing'	'Pratt'	'John wiley & Sons'	5	
75.	'Digital design '	'Mano, M'	Pearson	4	
76.	'Digital Electronics '	'Kharate, G.K.'	Oxford (Indian version)'	3	
77.	'Digital Fundamental '	Floyd'	'Pearson'	3	
78.	'Digital Image Processing'	'Rafael/Gonzalez/ Richard'	'Pearson'	20	
79.	'Digital Integrated Circuits: A Design Perspective '	'Jan M Rabaey'	Pearson'	2	
80.	'Digital Signal Processing '	'Proakis & Manolakis'	'Pearson'	3	
81.	'Digital signal Processing '	'Alan V. Oppenheim Ronald W. Schafer'	'PHI'	3	
82.	modern digital electronics	R. P. Jain	Mc Graw Hill	10	
83.	Fundamentals of microprocessors and microcontrollers	B. Ram	Dhanpat Rai and Sons	8	
84.	microprocessor architecture programming and applications with 8085	Gaonkar	Penram	5	
85.	Antenna theory: Analysis and design	Balanis C. A.	Wiley	2	
86.	Antenna and wave propagation	Krauss, Marhefka, A.S. Khan	Mc Graw Hill	5	
87.	microprocessors and interfacing	Hall D.V.	Mc Graw Hill	2	
88.	Mobile communications engineering	Lee W.C.	Mc Graw Hill	2	
89.	Fiber optics and optoelectronics	R. P. Khare	Oxford (Indian version)'	2	
90.	Digital Signal processing'	'Sharma, S.'	SK Kataria'	2	
91.	'Electrical and electronics engineering materials'	'Banerjee'	PHI	5	
92.	'Electrical measurements and Instrumentation'	'Shawney, A.K.'	Dhanpat Rai	10	
93.	'Electromagnetic Fields and Waves'	'Prasad, K.D'	Satya Prakashan, New Delhi	10	

94.	'Electromagnetic waves and radiating systems '	'Jordan/Balmain'	'PHI'	5	
95.	'Electronic Communication system '	'Kennedy'	'TMH'	10	
96.	'Electronic Communication system '	'Roddey &Coolen'	'PEARson'	5	
97.	Electronic devices and circuit theory '	'Boylestad and Nashelsky'	'Pearson'	20	
98.	Electronic devices and circuits '	Bell David A.	Oxford (Indian version)'	10	
99.	'Electronic measurements and instrumentation '	'PRASAD, R.'	'KHanna Publishers'	5	
100.	'Electronic principle '	'Albert Malvino& Davis J Bates'	'TMH'	10	
101.	'Embedded system design – A unified Hardware/Software Introduction '	'Vahid, Frank &Givargis, Tony'	Wiley '	2	
102.	'Fibre Optic System '	'John Powers'	TMH'	2	
103.	'Foundations of Microwave Engineering '	'R.F. Collins'	Wiley'	1	
104.	'Fundamentals of digital image processing '	'Jain,A.K.'	Pearson'	2	
105.	'Fundamentals of Fiber optics in telecommunication and sensor systems'	'B.P.Pal, '	'New Age International'	2	
106.	'Fuzzy Logic with Engineering Applications'	'Timothy J.Ross'	Wiley'	1	
107.	'Handbook of Biomedical Instrumentation'	'R. S. Khandpur'	'Tata McGraw Hill.'	1	
108.	'Microwave & Radar Engineering '	'M. Kulkarni'	'UMESH PRAKASHAN'	3	
109.	Microwave devices and circuits'	'Samuel Y. Laio'	Pearson'	3	
110.	'Monochrome and Color Television '	'R R Gulati'	'New Age International.'	2	
111.	An Introduction to omaterials and osciences'	Das A'	CBS'	2	
112.	Introduction to Neural Networks, Fuzzy Logic and Genetic Algorithms'	Sudarshan and Nageshwara'	Jaico Publishing House'	1	
113.	'Neuro-Fuzzy and Soft Computing'	'J.S.R.Jang, C.T.Sun and E.Mizutani'	Pearson'	1	
114.	'Optical Fiber Communication'	'G. Keiser'	'McGraw Hill'	3	
115.	'Optical Fiber Communications'	'J. M. Senior'	'PHI'	5	
116.	'Principles of electronics '	'V K Mehta and Rohit Mehta'	'S. Chand and Company, Delhi'	20	
117.	'Principles of Medical Electronics & Biomedical Instrumentation'	'Rao & Guha'	'University Press, India.'	1	
118.	'Real-Time Systems, Theory and practice '	'Rajib Mall'	'Pearson Edition'	1	
119.	'Real-time Systems: Design & Analysis '	'Phillip A. Laplante, '	WILEY'	1	
120.	Digital Signal Processing	Salivaha	Mc Graw Hill	7	
121.	Optical fibercommunicationsstems	L. N. Binh	CRC	1	

	with MATLAB and simulink models				
122.	Satellite communications'	Pratt'	Wiley'	2	
123.	'Semiconductor Devices'	'Jasprit Singh'	'Wiley Student Edition'	2	
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125.	'Sensors and transducers '	Patranabis'	'PHI'	2	
126.	'Solid sate electronic devices '	'Streetmen/ Banerjee'	'PEARSON'	10	
127.	'Solid State Physics '	Kittel'	Wiley'	4	
128.	'The 8051 microcontroller '	'Kenneth Ayala'	'Thomson Learning.'	3	
129.	'The 8051 Microcontroller and embedded system'	'Mazidi'	Pearson'	4	
130.	VLSI fabrication principles'	'Sorab Gandhi'	Wiley	2	
131.	'Wireless communications and networks'	'Stallings,W.'	'Pearson'	2	
132.	'The Intel Microprocessor 8086-Pentium processor '	'Brey'	'PHI'	1	
133.	Microwave Engineering	Annapurna Das	Mc Graw Hill	8	
134.	'The 8051 Micro controller & Embedded System '	'M.A.Mazidi&J.G. Mazidi'	'PEARSON'	3	
135.	'The 8051 Micro controller & Embedded System '	'M.A.Mazidi&J.G. Mazidi'	'PEARSON'	3	
136.	' A text Book of Railway Engineering'	'Saxena, S.C.Arora, '	'Dhanpat Rai & Sons'	15	
137.	'Air pollution control engineering'	'Rao & Rao'	'TMH'	10	
138.	'Applied Hydrology'	'Chow,V.T.'		5	
139.	'Building Drawing '	'B.P. Verma, '	'Khanna Publishers'	10	
140.	'Concrete Technology '	'Neville, A. M. & Brooks, J. J'	'PEARSON'	10	
141.	'CPHEEO Manual on water supply and treatment'	'Ministry of urban development'		5	
142.	IS 800: General Construction in Steel Code of Practice	B.S.I.		10	
143.	Plain and Reinforced Concrete-code of practice IS 456-2000'	B.S.I.		10	
144.	'Design of conctre structure Vol.1'	'Ramanutham'	'Dhanpat Rai & Sons'	10	
145.	'Design of conctre structure Vol.2'	'Ramanutham'	'Dhanpat Rai & Sons'	10	
146.	'Design of Reinforced concerts structure '	'by P.Dayaratnam'	'Oxford IBM publication, New Delhi'	10	
147.	'Engineering Drawing '	'N.D. Bhatt.'	'CHAROTAR'	20	
148.	'Estimating and Costing '	'B. N. Dutta'	'UBS'	10	
149.	'Flow in Open Channel '	'K.Subramanya'	'Tata McGraw Hill Publication Co. Ltd., New Delhi'	10	
150.	'Flow in Open Channels '	'K.G. Ranga, Raju'	'Tata McGraw Hill Publication Co. Ltd., New Delhi'	5	

151.	'Fundamental of Irrigation Engineering '	'Bharat Singh'	'Nemchand Bros., Roorkee, Uttarakhand.'	10	
152.	'Geotechnical Engineering '	'S. K. Gulati et. al'	'TMH Publication Co. Ltd., New Delhi'	10	
153.	'Ground water Hydrology '	'M. H. Raghunath'	'New Age Publication, New Delhi.'	10	
154.	'Hand book of machine foundaions'	'Srinivasulu/Vidya nathan'	'TMH'	10	
155.	'Highway Engineering'	'Khanna/Justo'	'New Chand'	10	
156.	'Irrigation & Water Power Engineering '	'Punima B.C., Pande Lal B.B'	'Laxmi Publication Pvt. Ltd. New Delhi.'	10	
157.	'Mechanics of Solid'	'Singh A.K., '	'PHI, New Delhi'	10	
158.	'Mechanics of solids'	'Popov'		10	
159.	'Plain and reinforced concrete Vol.-1'	'Krishna,J./Jain,O. P.'	'Nemchand bros. Rookee'	10	
160.	'Plain and reinforced concrete Vol.-2'	'Krishna,J./Jain,O. P.'	'Nemchand bros. Rookee'	10	
161.	Principle and practices of Highway Engineering	Kadiyali', Dr. N.B. Lal	'Khanna Publishers'	10	
162.	'Reinforced concrete Design '	'S.N.Sinha'	'Tata McGraw Hill New Delhi'	10	
163.	A textbook of water power engineering	R.K. Sharma, T.K. Sharma	S.Chand	10	
164.	Reinforced Concrete Structures	Dr. I.C. Syal, Dr. A.K. Goel	S.Chand	10	
165.	Concise handbook of civil engineering	V.N. Vazirani, S.P. Chandola	S.Chand	10	
166.	Higher Surveying	A.M. Chandra	New age international publishers	15	
167.	'Engineering Drawing '	'N.D. Bhatt.'	'CHAROTAR'	10	
168.	'A text book of economic theory'	'Stonier/Hague'	'Pearson'	10	
169.	'Advance economic theroy'	'Jhingan,M.L.'	'Konark Pub.'	10	
170.	'Automative Mechanics '	'Crouse'	'TMH'	10	
171.	'Automobile Engineering '	'GUPTA'		10	
172.	'Basic Mechanical Engineering '	'TJ Prabhu, V. Jaiganesh '	'Scitech.'	10	
173.	'CAD/CAM'	'Groober,M.P.'		10	
174.	'CaD/CAM/CIM'	'Radha,P./Raju,K.'		10	
175.	'Design data book '	'Mahadevan'		10	
176.	'Design data book '	'PSG institute of technology, Coimbatore'		10	
177.	'Design data book '	'Kali'		25	
178.	'Design of M/C elements '	'Sharma & Purohit'	'PHI'	10	
179.	'Design of machine elements '	'VB Bhandari '	'TMH'	10	
180.	'Double entry book keeping '	'Grewal'	'S.Chand'	10	
181.	'Engineering Thermodynamics '	'PK Nag'	'TMH'	10	
182.	'Gas Turbine '	'Ganesan'	'TMH'	10	

183.	'Heat & Mass Transfer'	'Nag,P.K.'	TMH	10	
184.	'Heat and mass transfer '	'Cengel'	'TMH'	10	
185.	'Heat and mass transfer '	'JP Holman'	'TMH'	10	
186.	'Heat Engines (Vol II) '	'R Yadav'		10	
187.	'Industrial Engineering '	'A.P. Verma '	'SK Kataria& sons'	10	
188.	'Industrial Engineering & Management '	'Dr. OP Khanna'	'DHANPAT'	10	
189.	'Internal Combustion Engines '	'V Ganesan '	'TMH'	10	
190.	'Managing Industrial Pollution '	'SC Bhatia'		10	
191.	'Manufacturing Systems Design & Analysis '	'B. Wa'		10	
192.	'Manufacturing technology '	'PN Rao'	'TMH'	10	
193.	'Material Science and Engineering : An Introduction '	'William D Callistor, Jr '	'WILEY'	10	
194.	'Mechine design'	'Sharma/Agarwal'	'S.kKateria'	10	
195.	'Mechanics of solids '	'LS Srinath'		10	
196.	'Mechanics of solids '	'Timoshinko& Gere'	'CBS'	10	
197.	'Modern micro economics thery'	'Ahuja'	'S.Chand'	10	
198.	'Organisation behaviour and industrial Pshycology'	'L.M.Prasad'		10	
199.	'personal management & Industrial relation'	'Tripath'	'S.Chand'	10	
200.	'Power Plant Engineering '	'PK Nag'	'TMH'	10	
201.	'Principles and practice of management'	'Prasad,L.M.'	'S.Chand'	10	
202.	'Production technology '	'RK Jain'	'KHANNA'	10	
203.	'Production, Planning and inventory control '	'Mcleavey and Bullington '	'PRENTICE HALL'	10	
204.	'Refrigeration and air conditioning '	'C P Arora'	'TMH'	10	
205.	'Refrigeration and air conditioning '	'Domkundwar'	'DHANPAT'	10	
206.	'Robotics'	'S. R. Deb and Sankha Deb'	'TMH'	10	
207.	'Theory of Machine '	'Thomas Bevan'	'CBS'	10	
208.	'Theory of machines '	'Shah and Jadhvani'	'DHANPAT'	10	
209.	'Thermodynamic'	'Cengel'	'TMH'	10	
210.	'Total Quality management'	'Raju,SM.'		10	
211.	Engineering Thermodynamics	Nag,P.K.	McGraw Hill	10	
212.	Engineering Thermodynamics for Engineers	Burghardt,M.D.	Harper & Row NY	10	
213.	Introduction to Chemical Engineering Thermodynamics	Smith,K/Van Ness,H.C	McGraw hill	10	
214.	Principles of Thermodynamics	Hsieg,J.	McGraw Hill	10	
215.	Principles of Thermodynamics, 7ed, SI Version	Shapiro/Boettner/ Bailey/Moran	wiley	10	
216.	Statistical Thermodynamics	Lee/Sears	Addition wesley	10	
217.	Thermodynamic for Engineers	Michael,A.S.	Prentice Hall	10	
218.	Gas Turbine Theory	Rogers,C/Muttoo	Loan man	5	
219.	Principles of Turbo Machines	Stephard,D.G.	Macmillan.co.	5	

220.	Steam Turbine Theory & Practice	Kerten,W.J.	CBS Publication	10	
221.	Theory & Design Of steam & gas turbine	Lee	McGraw Hill	5	
222.	Turbines, Compression & Fans	Yahya	Tata Mcfraw Hill	10	
223.	Composite Materials Hand book, Vol -I		ASM ainternational, Ohio	10	
224.	NDT & Evaluation of Materials	Prasad,J/Nair,C.G. K.	McGrqw Hill	10	
225.	Structure & Properties of Composites, Materials Science & Technology	Weinheim	VCH, Germany	10	
226.	Vol-13	Matthews,F.L./Rawlings,R.D.	Van Nostrand & Co.	10	
227.	Fluid Dynamics	Streeter,V.L.	Mc Graw -Hill	10	
228.	Fluid Dynamics, 3rd Revised Ed.	Goyal,J.K./Gupta,K .P.	PragathiPradasan ,Meerut 1989	10	
229.	Fluid mechanics	Fox,R.N./McDonald,A.T.	John Wwiley& Sons 1994	10	
230.	Foundation of Fluid Mechanics	Yuan,S.W.	Prentice Hall of India 1976	10	
231.	Gas Dynamics Vol-I	Zucrwo,M.J./Hoffman,J.D.	John Wiley & Sons Inc. 1977	5	
232.	Gas Dynamics Vol-II	Zucrwo,M.J./Hoffman,J.D.	John Wiley & Sons Inc. 1977	4	
233.	Hydrodynamics Theory & Application	Robertson	Prentice Hall of Inda 1965	5	
234.	Principles of Fluid Mechanics & Fluid Mechanics	Pillal,N/Ramakrishan,C.R.	University Press ,Hyderabad	10	
235.	Theory of Mechanism & Machines	Mallik,A.K/Ghosh, A.	East-west Press	10	
236.	Applied Finite Element Analysis	Lary,S.	John wiley	4	
237.	Schaum's outline of finite element analysis	Schaum's	Mcgraw Higher Ed	10	
238.	Text Book of finite Element analysis	Sheshu,P.	PHI	10	
239.	The Finite Element Method in Engg. Science	Zienkiewicz,O.C	Wiley & Sons	10	
240.	Introduction to Tribology of Bearings	Majumdar,B.C.	PHI	10	
241.	Lubricants Additives & Tribology	Srivastava,S.P.	Tech book Inernational , New Delhi	5	
242.	Composite Materials Engineering & Science	Matthews,F.L./Rawlings,R.D.	Chapman & Hall, Londaon	5	
243.	Composite Materials: Engineering	Chawla,K.K.	Springer NY	15	
244.	Computational Fluid Mechanics & Heat Transfer	Anderson,D.A.	McGraw Hill Eductation	4	
245.	Introduction to Computational Fluid Dynamics: The Finite Volume Method	Versteeg,H.K./Malalasekra,W.	Printice Hall ISBN -10:0131274988	10	
246.	Numerical Heat Transfer & Fluid Flow	Patankar,S.V	Taylor & Francis,ISBN-100891165223	10	

247.	Introduction To Energy Conversion Turbo Machinery :Energy Conversion Cycle VOL iii	Dadambi,V./Prasad,M.	NEW AGEINTERNATIONAL , NEW DELHI	10	
248.	Principles of Waste Heat Recovery	Stick,R.G/Thumanan,A.	PHI	5	
249.	Industrial Tribology	Sahoo,P	Tata Mcfraw Hill	10	
250.	Mechanical wear prediction & prevention	Bayer,G.	Marcel Dekkar Inc., NY	2	
251.	Conduction Heat Transfer	Arpacl, V.S.	Addison-Wesley	5	
252.	Radiation Heat Transfer	Cess,R.D/Sparrow, E.M.	Augmented Edition	3	
253.	Thermal Radiation Hear Transfer	Howell,R.R./Siegal, R.	CRC Press	10	
254.	Analysis of Heat &Mass Transfer	Eckert,E.R.D/Drake,R.M.	WILEY	5	
255.	Convective Heat Transfer	Burmister,L.C.	John wiley& Sons 1983	10	
256.	Fundamentals of Heat & Mass Transfer 2nd ed.	Kothandaraman,D. P.	New Age Internatinal ltd. 1997	10	
257.	Fundamentals of Heat & Mass Transfer 4th ed.	Incropera,F.P./De wit,D.P.	John wiley& Sons Inc. 1988	5	
258.	Heat & Mass Transfer,2nd ed.	Hloman,J.P.	Tat McGraw Hill 1989	10	
259.	Heat Transfer	Kern, D.d.	TMH	10	
260.	Mechanical Behavior of Engineering Materials	Marie,J		10	
261.	Mechanical Behavior of Engineering Materials	W. D. Biggs		5	
262.	Resistance of Materials	Lessels,J.M.		5	
263.	Theory of Thermal Stresses	Boley/Weiner	John willey	10	
264.	Ashrae Hand Book Vol-4 (Ashrae Handbook 2015: Heating, Ventilating, and Air-Conditioning Applications: Inch-Pound Edition (Ashrae Applications Handbook Inch/Pound)			5	
265.	Cryogenic Process Engineering	Timmerhaus,K.D/Fiynn,T.M.	Springer NY	4	
266.	Cryogenic Technology	A.R. Jha	Butterworth heinemann	10	
267.	Cryogenic Technology	Vance,R.W.	John Wiley &Sons,New York	10	
268.	Cyrenaic Systems	Barron,R.F	McGraw Hill	10	
269.	Refrigeration & Air-Conditioning	Prasad,M.	new age pub.	10	
270.	Refrigeration & Air-Conditioning Data	Stocker,W.F/Jones ,J.W	McFraw Hill	10	
271.	Dynamics of rotor-bearing systems	Goodwin,M.J	Kluwer Academic Publishers	5	
272.	Rotor Dynamics	Rao,J.S.	New Age, New Delhi	10	

273.	Applied Plasticity	Chakrabaarty	Butterworth heinemann	10	
274.	Engineering Plasticity	Meilor/Johnson	-Nostrand	10	
275.	Theory of Elasticity	Timeshenko/Good ier	McGraw Hill	10	
276.	Theory of Plasticity	hoffman/Sachs	McGraw Hill	10	
277.	Elements of Vibration Analysis	Meirovitch,L.	Tata Mcfraw Hill	5	
278.	Introductory course on theory & Practice of Mechanical Vibrations	Rao,J.G/Gupta,K.	new Age Publication	10	
279.	Theory of Vibration with Applications	Thomson,W.T.	pearson	10	
280.	Applied Tribology	Michael M. Khourari/E.Richar dBooder		3	
281.	Computational fluid dynamics & heat Transfer	Ghosh Dastidar,P.S		10	
282.	Energy management & Conservation	Sharma,K.V		10	
283.	Finite element analysis	Reddy,J,N		10	
284.	Introduction to Composite make& Design	Barbero,J		10	
285.	Matlab	Pratap,R	wiley	10	
286.	Matlab programming for Engineers	Stephen,J.Chapma n		10	
287.	Mechanical Vibration Analysis	Singlresu.S.Rao	pearson	10	
288.	Rotor System analysis & identification	Rajeev Tiwari		3	
289.	Theory of elasticity	Sadhu Singh		10	
290.	Theory of plasticity	Sadhu Singh		10	
291.	'Advance differential equation'	'Raisinghania,M.D'	'S.Chand'	5	
292.	'A text book of Engineering Mathematics'	'Bali/Goyal'	'Laxmi Pub.'	10	
293.	'A Text book of matrices'	'Shanti Narayan'	'S.Chand'	40	
294.	'Advance engineering mathematics'	'Dass,H.K.'	S.Chand	25	
295.	Introduction to Partial Differential Equations'	Rao K.S	PHI	5	
296.	Complex variables(Theory & Application)'	Kasana,H.S.'	'UBS Publication'	10	
297.	'Differential calculus'	'Gorakh prasad'	Pothishala Private Limited	20	
298.	'Differential Equation'	'Raisinghania,M.D'	'S.Chand'	20	
299.	'Differential equation'	'Ross,S.L.'	'wiley'	10	
300.	Introduction to Engineering Mathematics - Vol. 1'	Dass,H.K.'	S. Chand	25	
301.	Introduction to Engineering Mathematics - Vol. II'	'Dass,H.K.'	S.Chand	20	
302.	'Higher Engineering Mathematics'	Dr. B. S. Grweal'	Khanna Publishers	25	
303.	'Integral calculus'	Dr. Gorakh prasad'	Pothishala Private Limited	20	
304.	Advance Engineering Mathematics	Dr. V. P. Mishra	Bhavya Books	10	

305.	'Matrices'	Vasishtha,A.R.'	'Krishan Publication'	40	
306.	Foundations of Complex Analysis'	Ponnusamy,s.'	Narosa Pub.'	10	
307.	Introductory Methods of Numerical Analysis	Sastry S.S	PHI	10	
308.	Laplace And Fourier Transforms	Goyal J K and Gupta K P	A Pragati Edition	10	
309.	' Principles Of Mechanics '	'Jl Syngé & Ba Griffiths '	'McGraw Hill Education;'	1	
310.	'An Introduction To Mechanics '	'D Kleppner& R Kolenkow'		1	
311.	'Fundamentals Of Photonics'	' B. E. A. Saleh And M. C. Teich'	'John Wiley & Sons, '	1	
312.	'Introduction To Electrodynamics '	'David Griffiths'		12	
313.	'Introduction To Mechanics '	'Verma,m.k.'		5	
314.	'Mechanical Vibrations'	'Jp Den Hartog'		1	
315.	'Mechanics'	'Jp Den Hartog '		1	
316.	'Optical Fiber Communications: Principal and pratice'	'John M. Senior '		10	
317.	'Photonics Optical Electronics In Modern Communications'	'YarivAnd P. Yeh'	'Oxford University Press, New York (2007). '	1	
318.	'Physics'	'Halliday And Resnick'		3	
319.	'Principal of Electronics '	'V.K. Mehta '		10	
320.	'Semiconductor Devices: Physics And Technology'	'S. M. Sze'	'Wiley (2008'	1	
321.	'Semiconductor Optical electronic Devices'	' P. Bhattacharya'	'Prentice Hall Of India (1997'	1	
322.	'Semiconductor Optoelectronics: Physics And Technology'	'J. Singh'		1	
323.	'A text book of fluid mechanics'	'Rajput,R.K.'	'A text book of fluid mechanics'	5	
324.	'Acrylics and their uses in leather manufacture'	'Rajadesa, S. and Kula Sekhran'	'Acrylics and their uses in leather manufacture'	5	
325.	'An Introduction to the principles of physical testing of leather '	'Prof. S. S. Dutta'	'An Introduction to the principles of physical testing of leather '	5	
326.	'Analytical Chemistry of leather manufacture '	'Sarkar,P.K.'	'Analytical Chemistry of leather manufacture '	5	
327.	'Biological waste water treatment – Theory and application '	' C.P. Lertem Grady, Jr. Henry C. Um.'	'Biological waste water treatment – Theory and application '	5	
328.	'Chemical Engineering for GATE'	'Dr. Prasad,R.'	'Chemical Engineering for GATE'	5	
329.	'Chemical Process Control'	'George Stephanopoulos'	'Chemical Process Control'	5	

330.	'Chemical reaction Engg. I'	'Gavhane,K.A.'	'Chemical reaction Engg. I'	5	
331.	'Chemical Reaction Engineering'	'Rajput,R.K.'	'A text book of fluid mechanics'	5	
332.	'Different standards '	'Rajadesa, S. and Kula Sekhran'	'Acrylics and their uses in leather manufacture'	5	
333.	'Dryden(out line of chemical technology'	'Prof. S. S. Dutta'	'An Introduction to the principles of physical testing of leather '	5	
334.	'Experimensinpolymer science'	'Sarkar,P.K.'	'Analytical Chemistry of leather manufacture '	5	
335.	'Heat transfer principal and application'	' C.P. Lertem Grady, Jr. Henry C. Um.'	'Biological waste water treatment – Theory and application '	5	
336.	'Heat transfer principal and application'	'Dr. Prasad,R.'	'Chemical Engineering for GATE'	5	
337.	'Inroductionpolymeo science & technology'	'George Stephanopoulos'	'Chemical Process Control'	5	
338.	'Introducion to Chemical Engineering thermodynamics'	'Gavhane,K.A.'	'Chemical reaction Engg. I'	5	
339.	'Introduction to Process calculation stoichiomtly'	'Rajput,R.K.'	'A text book of fluid mechanics'	5	
340.	'Introduction to the Principles of Leather Manufacture'	'Rajadesa, S. and Kula Sekhran'	'Acrylics and their uses in leather manufacture'	5	
341.	'Manual of Shoe – making '	'Prof. S. S. Dutta'	'An Introduction to the principles of physical testing of leather '	5	
342.	'Mass Tranfer '	'Sarkar,P.K.'	'Analytical Chemistry of leather manufacture '	5	
343.	'Mass Transfer operations'	' C.P. Lertem Grady, Jr. Henry C. Um.'	'Biological waste water treatment – Theory and application '	5	
344.	'Mass Transfer Vol II'	'Dr. Prasad,R.'	'Chemical Engineering for GATE'	5	
345.	'Microbiolog'	'George Stephanopoulos'	'Chemical Process Control'	5	
346.	'Molecular Biology of gene'	'Gavhane,K.A.'	'Chemical reaction Engg. I'	5	
347.	'Official methods of Analysis '		'SLTC, U.K'	5	
348.	'orgnic Chemistry'	'Morison boyd'	'pearsoneducati onindia'	5	
349.	'Physical chemisty of leather making'	'KozysztofBelnkiewicz'	'Khieger Pub.'	5	
350.	'Physical esting of leather making'	'Dutta,S.S.'	'ILTA, Kolkata'	5	

351.	'plant design & economics for chemical engineers'	'Peters, M.S'	'Mc-Graw Hill'	5	
352.	'Polymer science'	'Gowarik, V.R.'	'New Age International'	5	
353.	'Principle & Fundamental of mass transfer-I'	'Kiran, D./Patil'	'Nirali Pub'	5	
354.	'Principle of Footwear Manufacture'	'Somnath ganguly.'		5	
355.	'Principle to mass transfer & Separation Process'	'Dutta, B.K.'	'Prentice Hall'	5	
356.	'Principles of Biochemistry'	'Lehninger A.L'	'Butterworth'	5	
357.	'Process system analysis & Control'	'Leblanc Coughanowr'	'Mc.graw hill edu'	5	
358.	'Quality Management – Concepts and Tasks'	'Narayana V. and Sreenivasan, N.S'	'New Age International'	5	
359.	'Technical Controls in Leather Manufacture'	'Bangau Swami, '	'CLRI.'	5	
360.	'Text book of Footwear Manufacture'	'Thronton, J.H.'		5	
361.	'The text book of Footwear manufacture'	'J. H. Throntin'		5	
362.	'Theory & Practice of Leather Manufacture'	'– K. T. Sarkar, Macmillan'	'Macmillan India Press, Chennai'	5	
363.	'Total Quality Management'	'Dale H. Besterfo'	'Person Education Asia, '	5	
364.	'Total Quality Management'	'Feigenbaum. A.V. '	'M.cGraw-Hill'	5	
365.	'Total Quality Management for Engineers'	'Zeiri.'	'Wood Head Publishers'	5	
366.	'Unit operation -I'	'Gavhane, K.A.'	'Nirali Pub'	5	
367.	'Unit operation of Chemical Engg.'	'Mccalbe, W, L./Smith, J.C.'	'mcgraw hill'	5	
368.	'A text book of engineering chemistry'	'Shashi Chawla'	'Dhanpat'	25	
369.	'Engineering Chemistry'	'Shelley obaroi/ Malik'	'Cengage learning'	15	
370.	'Essentials of experimental engineering chemistry'	'Shashi Chawla, '	'Dhanpat'	25	
371.	'Experiments in physical chemistry'	'Ghosh, J.C'		25	
372.	'Fundamentals of molecular spectroscopy'	'Banwell, C.N.'		15	
373.	'Organic spectroscopy'	'Jag mohan'		15	
374.	'Physical chemistry'	'Atkins, P.W.'		15	
375.	'Practical Chemistry (B.Sc.)'	'Sinha, N.K.'		25	
376.	'A handbook of English phonetics & Phonology'	'Damodar hakur'	'Bharti bhawan Pub.'	10	
377.	Practical English Usage	Michael Swan	Oxford University Press	20	
378.	Remedial English Grammar	F.T. Wood	Macmillan	20	
379.	On Writing Well	William Zinsser	Harper Resource Book	20	
380.	Study Writing	Liz Hamp-Lyons and Ben Heasley	Cambridge University Press	20	
381.	English Phonetics and Phonology: A Practical Course	Peter Roach	Cambridge University Press	20	

382.	English for Technical Communication.	N.P.Sudarshana & C. Savitha	Cambridge University Press	20	
383.	Communication in English for Technical Student		Oriental Longman	20	
384.	Business Correspondence & Report Writing	R.C. Sharma & Krishna Mohan	Tata McGraw Hill	20	
385.	Current English Usage	Frederick T Wood	Papermac	20	
386.	Guide To Patterns and Usage in English	A S Hornby	Oxford University Press	20	
387.	Longman dictionary of Common errors		Longman	20	
388.	Collins common errors in English		Collins	20	

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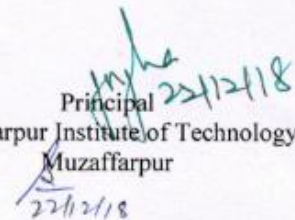
PACKAGE 6: Pharmacology Lab

S No.	Product	Quantity	Specification	Price
1	Microscope, Student, Monocular,	15	Complete with two eyepieces 10X, 15X and two objectives 10X, 45X.	
2	Heamocytometer	20	The complete set includes one counting chamber, RSEB02 two 0.5mm cover glasses, one red cell pipette, one white blood cell pipette, tubing, mouthpieces and carrying case. A counting chamber is a precision measuring instrument made of special optical glass. It is used to count cells or other particles in suspensions under a microscope. Counting chambers are mainly used for blood analysis (counting leucocytes, erythrocytes and thrombocytes) and to count cells of liquor. Counting chambers are also used, however, to count bacteria and fungus spores.	
3	Sahil's Hymocytometer	20	Sahli is supplied as complete set consisting of: polystyrene support with RSEB03, 2 coloured rods and opal glass plate comparator tube haemoglobin pipette 20 µl acc. to Sahli silicone tubing of approx. 16 cm length white mouth piece dropping pipette with rubber teat stirring rod acid vial cleaning brush directions for use without CE - mark, only for sale and application outside EC	
4	Hutchinson's spirometer	1	Application Industrial Use, Laboratory Use RSEB04 Capacity 6 Litre Type Hutchinsons Spirometer Capacity 6 litre complete with chain / chord compensates counter balance to float through pulley. Tube calibrated to denote volume. Inlet and outlet tubes provided. Complete with corrugated tube and mouth piece.	
5	Spygmomanometer,	5	Blood pressure classification indicator large lcd size for clear visibility average calculation for the latest RSEB05 3 measurements to give correct readings indicates systolic & diastolic pressure and pulse per minute dial up sleek, easy to operate and light in weight design calibrated up to 300 mm hg, this apparatus offers accurate results. the cuff of this equipment are made of superior quality material with velcro fasteners that are extra wide. mercury free lcd display b.p. machines environment-friendly mercury-free sphygmomanometer pressure values displayed by liquid crystal	

			column and lcd-screen display instead of the mercury column.	
6	Stethoscope,	5	The Stainless Steel Cardiology Type Stethoscope that is available with stainless steel chest RSEB06 piece for maximum convenience, these offer great comfort to the medical practitioners in checking up the patients. We offer these at industry leading prices to our clients spread across the nation.	
7	Permanent Slides	100	Size 75 x 25 mm and Made of RSEB07 Glass, Different Topics and Price of EACH	
8	Models	30	Imported Very Superior made of PVC Large size: 25x23x23cm and RSEB08 Dissectable in Parts	
9	Specimen	20	RSEB09,	
10	Skelton and Bones One set of Bones	1	RSEB10,HumanSkeleton <ul style="list-style-type: none"> • Size: 170 cm life size. • Made of PVC plastic. • Removable arms and legs. • Features nerve branches, vertebral artery and hemiated lumbar disc. • Skull RSEB10, includes movable jaw, cut calvarium, suture lines and three removable lower teeth. • Mounted on a sturdy 40cm wide base. • Washable & Unbreakable • Ideal for teaching the basics of human anatomy. 	
11	Different Contraceptive Device and Models	5		
12	Muscle Electrode	1	Compex electrodes are used during muscle stimulation with Compex RSEB12, devices and play a big part in the muscle stimulation session.	
13	Lucas Moist Chamber	1	New nerve Muscle chamber / Lucas Moist Chamber : Bath size 17 x 33 cm fabricated out of transparent RSEB13,perspex sheet, chemically welded to make it perfectly leak-proof. Complete with cork lined bottom, a pair of adjustable silver electrodes, clamps & drain, interchangeable muscle & heart lever fitments.	
14	Myographic lever	1	With Standard ¼ threaded vertical Stem for fixing to standard myograph RSEB14, board, after load screw and fixing check nuts.Stainless Steel Cap Lever	
15	ELECTRONIC STIMULATOR	1	Student Stimulators Transistorised : Output 0-25 DC in two steps, duration .5 or 1.5ms frequency 5 to 100 c/s in 11 steps, RSEB15 ,modes, single, repetitive or an external trigger, for 220V 50 Hz.	

16	Centrifuge	1	with 4 x 15 ml. swing out head & 15 ml tapered	
17	Electronic Balance Digital	1	1 gm to 300 gm	
18	Physical Balance	1	with divided door Teak wood case and expended support. . Sensitivity - 0.5 mg. RSEB18 ,Capacity — 200 gm.	
19	Sherrington's Rotating Drum, Electrical, E-8,	10	Electrical E-8 Student Kymograh with special heavy duty motor, oil lapped gear systems, speeds from 0.12 mm/Sec. to 640 mm/sec, in 8 steps, RSEB19, Jerk free running, instantaneous start & stop clutch. Stainless steel spindle with screw lift 15x15cm cylinder, with levelling Screws, pilot lamp, plug & cord.	
20	Perpex Bath Assembly	10	A Perspex organ bath with fine thermostatic temperature control, electronic stirrer and complete set of accessories, making it a versatile unit for all research work. Bath 12"x9"x8", RSEB20,with leak proof dovetailed joints, resting in sturdy metal frame; top of the bath carries a 1"x3/8" hick band, for fixing accessories, inside the bath is a metal sheathed heating element	
21	AERATION TUBE	10	ABG BOROSILICATE RSEB21, GLASS AERATION TUBE FOR PHARMACOLOGY LAB	
22	Computer with LCD	1	Dell Desk Top Inspiron 3268 2017, core-i-5 7th geeration, 8 GB DDR 4, 1 TB/Window 10 /office Home & Student 2016.	
23	UPS	1	Luminous UPS with an output power 600 VA	
24	Software packages for Experiment	2		
25	Standard Graps of Varior drugs	10		
26	Actophotometer	1	Acto-Photo-Meter (activity cage) is used for monitoring spontaneous & induced ambulatory activity of laboratory animals. Provided in a powder coated sturdy body with Bakelite meters & superior quality RSEB 25, design. It consists of six built-in photo sensor and 4 digits digital counter to indicate the loco meter activity, It also incorporates electric shock of up to 100 volts for activating animals. The stimulus is variable from 0 to 100v & indicating on the meter.	

27	ROTAROD APPARATUS	1	For determining neuro-pixicity, muscle tone, balance and motor co-ordination in rats and mice. Consisting of two RSEB26, compartments of 75mm width each with a rotating rod of 25mm diameter having speeds of 5,10,15,20 and 25 r.p.m. with time interval counters in each compartments.	
28	Pole Climbinmg Apparatus	1	solid state buzzer and stimulator to provide electrical RSEB27, shocks of 400V in pulsating rates 0.2 mA a frequency of 5 per sec. for a duration controlled manually or by built in 30 second timer. Output available for recording on kymograph or polygraph complete to work on 220V A.C.	
29	Analgesiometer(Sddy's Hotr Plate)	1	consisting of 8 ' Inch round RSEB28, heating surface with perpex enclosure and solid state temperature controller with Micro-controller based ManualTemperature Indicator controller to set surface temp. Between 30° to 80°C.	
30	Convulisiometer	1	The instrument provides 50Hz stimulus current which can RSEB29, be adjusted from 0.15mA to 330mA in discrete steps for producing minimal and supra maximal Seizures required in the assaying of anti-epileptic and anti-convulsant drugs. The application of stimulus current can be controlled by an electronic timer from 0.1sec. to 1 sec. in steps of 0.1 & the 11th step is of 3 secs. An L.E.D indicates the duration of stimulus.	
31	Plethysmograph	1	It is a simple RSEB 30, apparatus containing mercury to study the anti-inflammatory properties. The mercury displacement due to dipping of the paw can be directly read from the scale attached to the mercury column	
32	Digital PH Meter	1	RSEB31,Display Type 16 x 2 alpha numeric LCD display Display DigitalApplication Laboratory Type of PH Meter Table-top	
33	Folin-Wu Tubes	60	RSEB32 ,Bolosilicate Glass	
34	Tray Dissecting	10	RSEB33, Dissecting with wax made of aluminium sheet size 10"x12".	
35	Haemostatic Artery Forceps	10	RSEB34,Made of Steel , and size is 6"	
36	Hypodermic syringes and needles	10	RSEB35,Made of Plastic and size 15,24,26G	
37	Simple Lever	20	RSEB35, Made from Brass & Stainless Steel, with writing lever.	


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PACKAGE 7: Pharmacognosy Lab

S No.	Product	Quantity	Specification	Price
1.	Microscope Monocular (Compound)	15	with 10x, 40x & 100x (Oil Immersion), ISI Mark	
2.	Stage Micrometer	15	RSEB37, Imported Japanese make graduation 1 mm= 100 division., Slide size: 25mmx75mm Measuring range: 0-25/50-75/75-100mm	
3.	Digital Balance	2	0.1 gm to 220gm	
4.	Autoclave	2	Portable, Complete Aluminium., Size 300x375mm	
5.	Hot Air Oven	2	300x300x300 (12"x12"x12"), Cap. 45ltrs with Inner S.S. Chamber, Thermostatically Controlled	
6.	Digital temp indicator	1	Digital temp indicator-cum-controller for all above models	
7.	BOD Incubator	1	Temp range 5°C to 50°C ± 1°C. Double walled with digital temp-cum-indicator controller, 4cuft, Cap 171ltr, Stainless Steel Chamber	
8.	Laminar Air Flow	1	Horizontal Type, Wooden, 2'x2'x2'	
9.	Colony Counter,	2	RSEB42, Digital Colony Counter, digit LED display, Range 0-9999	
10.	Zone Reader, Antibiotic,	1	The antibiotic zone reader provides a rapid accurate method RSEB43, for determining the strength of antibiotic materials by measuring the diameter of an inhibited zone in petri dish. This zone reader measures the diameter of the inhibited zone to 0.02mm. with the range of 0 to 35mm. work on 230volts A.C. 50 C/S..	
11.	Digital PH Meter	1	Bench Top with ATC	
12.	Microscope Monocular (Compound)	20	with 10x, 40x & 100x (Oil Immersion), ISI Mark	
13.	Stage Micrometer,	20	RSEB37, Imported Japanese make graduation 1 mm = 100 division., Slide size: 25mmx75mm Measuring range: 0-25/50-75/75-100mm	
14.	Sterility Testing Equipment	1	RSEB44, Unit Size 47 mm Material Stainless Steel Max Flow 45 LPM Display Digital	

15.	Camera Lucida, Mirror Type	15	with this unit it is possible to draw the image seen in the microscope. RSEB45, The mirror reflects the pencil point image into an abbe prism clamped over the eye-piece and superimposes it up on the specimen image. The prism box is hinged for quick change of eye-piece for normal observation complete in velvet box.	
16.	Eye Piece Micrometer	15	RSEB46, Material Brass, (Scale 0-10)	
17.	Stage Micrometer,	20	RSEB37, Imported Japanese make graduation 1 mm = 100 division., Slide size: 25mmx75mm Measuring range: 0-25/50-75/75-100mm	
18.	Incinerator	1	Body should be made of mild steel duly powder coated of heavy gauge and robust construction. Heating element must be made of Kanthal wire. Ducting shall also provided with this instrument. The instrument should contains two chambers, primary and secondary. Temperature in primary chamber should attain 800deg C, where as in Secondary chamber is 1000deg C, Inner chamber shall be made of ceramic and heavy silicone fiber insulation duly controlled by Dual Display Microprocessor PID Digital Temperature Indicator cum Controller and unit shall be supplied with 8 feet long duct.	
19.	Moisture Analyzer	1	MB-40, 1mg to 40gm	
20.	Heating Mantle	15	It should withstand high temperature up to 300°C. The body of the mantle should spun one piece (up to 10 Liters Capacity) duly powder coated. All heating mantles must be lagged with special grade mineral wool. To work at 220/230 Volts. A.C.	
21.	Digital photo Flour Meter	1	Features: Automatic pressing sample and uniform pressure, Non destructive examination and automatic temperature compensation, Display-Digital, Test range- 5-40%, Accuracy- 0.5%	
22.	Vacuum Pump	2	Single stage vacuum pump model VE115N, 1/4 HP 240 volt	
23.	Micropipette	1	Fixvo II Micropipette - 1000 Capacity - 1000 µl	
24.	Micropipette	1	Fixvo II Micropipette - 1000 Capacity - 1000 µl	
25.	Micro Centrifuge	1	max. speed 6000 rpm, supplied with 8 X 1.5 ml	
26.	Projection Microscope	1	Huygenian eye piece 10x, achromatic objective 5x and 10x Magnification 50x- 100x Complete with built in transformer and light arrangement.	

27.	Reflux flask	20	RSEB52, with condenser (B-34 Joint), Borosilicate Glass	
28.	Water Bath	20	RSEB53, Metal in Copper and size= 8"	
29.	Clavengers Apparatus	10	Consisting of 1000ml flask, RSEB55,oil separator tube and condenser.	
30.	Soxhlet Apparatus,	3		
31.	Soxhlet Unit (Mantle Type)	10	Unit of 3 Mantles	
32.	Borosilicate Glass Parts of above	10	RSEB57, For 3 Unit Mantle, 500ml flask set	
33.	TLC Chamber and Sprayer	4		
34.	Chromatographic Tank(Developing Chamber)	10	RSEB58, with cover for TLC Plates of Size 20x20cm	
35.	Glass Sprayer	10	RSEB59, with rubber bellow and Glass bottle/Flask	
36.	Glass Distillation Unit	1	RSEB60, Single Cap 5ltr/Hr with autocut	


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PACKAGE 8: Pharmaceutical Chemistry Lab

S No.	Product	Quantity	Specification	Price
1.	Hot Plate Round 8"	5	20cm dia with heating element of 1.5kw	
2.	Hot Air Oven	3	Size- 300mmX300mmX300mm with S.S. Chamber, Thermostatically Controlled	
3.	Digital temp indicator	3	Digital temp indicator-cum-controller for above.	
4.	Analytical Balances	5	0.1mg to 220gm	
5.	Digital Balance	5	Cap 610gm±0.01g (10mg)	
6.	Suction Pump	6	Single stage vacuum pump model VE115N, 1/4 HP 240 volt.	
7.	Muffle Furnance	1	Size-100mmX100mmX250mm Thermostatically Controlled	
8.	Mechanical Stirrer	5	Mini stirrer with PMDC Motor having Stirring shaft & propeller in SS 316,Digital Speed indicator & speed regulator.	
9.	Magnetic Stirrer	5	1 litre capacity with hot plate & Digital Speed Indicator.	
10.	Digital PH Meter	1	Bench Top, with ATC	
11.	Microwave Oven	1	Bajaj 20 L Grill Microwave Oven, 20 L : Great for a family of 3Grill : Can be used for grilling along with defrosting, reheating and cooking foodTouch Key Pad (Membrane) is sensitive to touch and easy to cleanChild Lock : Ensures complete safety especially for homes with small children	
12.	Distillation Unit	2	RSEB64, Material SS, Capacity- 4 liter.	
13.	Glass Distillation Unit	2	Cap 3ltr/Hr with autocut, RSEB65, Single , Borosilicate glass	
14.	Reflux flask	20	RSEB66,with condenser single necked, Borosilicate glass	
15.	Reflux flask	20	RSEB67 with condenser Triple Necked, Borosilicate glass	
16.	Reflux flask	5	RSEB68, with condenser Double Necked, Borosilicate glass	
17.	Burettes	40	RSEB69, 50ml, Borosilicate Glass, Screw type Rotaflow stopcock with PTFE key as per class B	

18.	Arsenic Limit Test Apparatus,	20	RSEB70, consists of a 100-ml bottle or conical flask closed with a rubber or ground glass stopper through which passes a glass tube (about 20 cm x 5 mm). The lower part of the tube is drawn to an internal diameter of 1.0 mm, and 15 mm from its tip is a lateral orifice 2 to 3mm in diameter	
19.	Nessler's Cylinders	40	50ml, Borosilicate Glass	

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PACKAGE 9: Pharmaceuticals Lab

S No.	Product	Quantity	Specification	Price
1.	Homogenzier	5	High Speed with 1/8 HP Motor & Transformer speed regulator, Model RQ127 A/D Remi	
2.	Digital Balance	5	Capacity 500 g, RSEB73, Features Shipping Dimension - 10x10x10 cm.500 g Digital Balance With Wind Shield Adopter	
3.	Microscope, Medical, Monocular	5	Horse shoe base with fixed square stage 110 x 110mm. Black/Grey Japanese finish body with chromium plated parts. Inclination angle 90o with coarse and fine movement. Triple revolving nosepiece fitted with monocular tube with Mirror for illumination. In polished wooden cabinet with lock and key arrangement. Complete with two eyepieces 10X, 15X and two objectives 10X, 45X. Total magnification 600/675x Good quality fitted with fixed condenser & Iris diaphragm.	
4.	Stage Micrometer	5	RSEB37, Imported Japanese make graduation 1 mm = 100 division., Slide size: 25mmx75mm Measuring range: 0-25/50-75/75-100mm	
5.	Viscometer Glass	1	RSEB74, Material Borosilicate Glass	
6.	Ball Mill	1	RSEB75, Motor Type AC Motor Type Ball Mill Revolutions per minute 80 Capacity Upto 1 Kg	
7.	Sieve Shaker	1	RSEB76, Voltage (V) 220/230 Volts Six Sieves 6" to 8" Outer Size 14"x14"x6.5" Rating Watts 70, Fitted with a FHP motor, it can accommodate six sieves of Speed can be regulated through a continuously variable speed regulator , with Sieve Set, Complete	
8.	Double Cone Blender	1	range of Cone Blender 5 kg	
9.	Propeller Type Mechanical agitator	5	RSEB78, Propeller Type Mechanical Agitator : Stainless steel rod with propeller type blade. Fitted with 1/20 HP motor with 4000 RPM with a speed regulator. Unit fitted on heavy cast-iron base. It can be raised and lowered in height. Complete with plug-cord etc. It works on 220V AC 50Hz single	

10.	Autoclave	1	Portable, Complete Aluminium., Size 300x375mm	
11.	Steam Distillation Still	1	RSEB64, Material SS, Capacity- 4 liter.	
12.	Vacuum Pump	1	Single stage vacuum pump model VE115N, 1/4 HP 240 volt	
13.	Sieves	10	RSEB80 ,Standard Size 8,10,12,22,24,44,66,80	
14.	TABLET MACHINE HAND OPERATED	1	RSEB81, Single punch for making tablets upto 1000 mg. and as per size of the punch 6mm. Automatic compression and ejection devise with each revolution of the wheel drive, automatic feed and removal of tablets. Built on heavy cast body with acentric pressure system. Stainless steel hopper provided and connected by a rubber tube. Easy setting for thickness and hardness of tablets with nuts and lock nuts, set of two spanners provided as necessary tool die. Heavy duty	
15.	Capsule Filling machine	1	A versatile lever operated semiautomatic machine for various operations with levers is order of 1. plates for putting of capsule by hand 2. removal of caps 3. filling of powder by dispensing of brush pressing 4. fixing of caps and sealing 5. Injection of capsules. Contact parts of stainless for 100 capsules of size 0 to 2 or 5 (anyone size in order). -do-capacity of 200 capsules at time.	
16.	Ampoule Washing Device	1	RSEB83, Jet needle type, consist of 6 S. Steel needle jets fixed on a brass (chromium plated) pipe of 12.5 mm dia with side tap and serrations for fixing rubber with tap water. Springs loaded ampul holding arrangement for various sizes of ampuls. With stainless steel bottom tray on stand.	
17.	AMPULE FILLING AND SEALING DEVICE	1	RSEB84, Hand operated without gas cylinder for sealing, but supplied with gas burner (filling capacity from 10 mL. to 50 mL.)	
18.	TABLET DISINTEGRATION TEST APPARATUS	1	I.P. standard as above with single disc. with six removable glass vessels (7.5 x 20 mm dia) have a stainless steel wire mesh bottom, which dip in water in a beaker of 1000 mL. kept on the hot plate, temperature of which is maintained 37°C with an accuracy of $\pm 1^\circ\text{C}$	
19.	Tablet Dissolution test appartus	1	Single Test Unit, Digital	

20.	Monsanto taype hardness tester	1	A fairly handy instrument for taking quick readings for the hardness of tablets it is made of brass turned parts. Heavily chrome plated the scale is 0 to 20 Kg. The index mark and division is in reading. Scale is adjustable for zero setting as per size of the tablets.
21.	Pfizer type hardness tester	1	A fairly handy instrument for taking quick readings for the hardness of tablets it is made of brass turned parts. Heavily chrome plated the scale is 0 to 20 Kg. The index mark and division is in reading. Scale is adjustable for zero setting as per size of the tablets.
22.	Friability test apparatus,	1	Used to determine the durability and abrasivness of tablets. A transparent perspex drum (made of imported perspex sheet 6.4 mm thick) 300 mm dia x 35 mm. deep and - white cover disc and nut, also a shaped radial fixed blade which carries the tablets along with it up to the central height and lets them off while the drum is rotating. Thus the tablets rub against each other without any hard impact. The drum rotates at a fixed speed of 30 R.P.M. by a geared motor and the rotation period is controlled by a timer (imported time switch duration I to 15 minutes) per determined end preset. The motor unit is housed in a shaped steel cabinet with shaft extended on one side upon which the drum rotates. Switches with neon indicators and time switch are fitted on a panel and provided work on 220 volts 50 C/s A.C.
23.	CLARITY TEST EQUIPMENT FOR AMPULS	1	Milky white and black screen fitted on a base board with, diffused light arrangement overall dimensions are 23"x15"x18" high.
24.	Ointment Filling Machine Hand Operated	1	Suitable to RSEB91, fill tubes, bottles etc. in the range of 5 gms. to 90 gms. per stroke, motorised operated (motor 1/2 HP or DC geared motor). The unit is supplied complete with 3 set of standard nozzles and all electrical accessories in the motorised models.
25.	Collapsible Tube Filling Machine	1	Stroke type, barrel and piston arrangement with strock, setting for various capacity of filling of tubes (from 5 gms to 50 gms.) detachable nozzles provided for each separate capacity. All contact parts are of stainless steel also stainless steel holder. Built on cast iron body, hand lever operated.,

26.	Tablet Coating pan Only Pan	1	The machine is worked,by oil immersed gearbox with 1/4 H.P. Motor driven, or by Heavy duty DC Geared Motor.Air blower is operated independently and air is thermostatically controlled to give temperature 30° to 110°C. Switches for motor & blower are fixed on a panel with neon indicators. Also mains lead with 15 amp plug provided.,
27.	Magnetic Stirrer	10	1 litre capacity with hot plate & Digital Speed Indicator.
28.	Digital PH Meter	2	Bench Top with ATC
29.	Aseptic Cabinet	1	RSE-607A1, SIZE : 2 X 2''
30.	BOD Incubator	2	Temp range 5°c to 50°c ± 1°c. Double walled with digital temp-cum-indicator controller,4cuft, Cap 171ltr, Stainless Steel Chamber
31.	Bottle Washing Machine	1	Is fabricated in a MS Sturdy Frame with SS wash basin and fitted with brass swan neck water tap. RSEB96,Single Brush with Single Motor. Spindles are Rotated with the help of DC Motor And Speed is Adjustable. Operation on 220V A. C. Single Phase.
32.	Bottle Sealing Machine	1	RSEB97,Material Mild SteelDriven Electric Voltage 220VFrequency 50Hz
33.	Bulk Density Apparatus	2	Specially designed to study, the packing down of powder, beds of different pharmaceuticals and chemicals in the process of tablet manufacturing, capsule filling & cosmetics. Installed with an automatic device for preset of strokes. Gear driven Noiseless and sturdy motor, also provided with an electronic timer. Elegantly designed for smooth operation electrically operated on 230v AC, 50 Hz.,
34.	Conical Percolator s.s	10	RSEB99,Capacity 1000 ml. with lid drain cock, stainless steel sieve on 3-legged stand.
35.	Capsule Counter manual	2	RSEB100,For 100 holes and Alumium and ss
36.	Energy Meter	2	RSEB101, Reliability 99.7- 100%Phase Single PhaseVoltage 220 V
37.	Hot Plate Round 8"	2	20cm dia with heating element of 1.5kw
38.	Humidity Control Oven	1	455x455x455mm(D) (18"x18" x18")

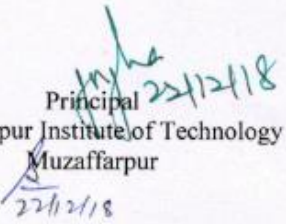
39.	Liquid Filling machine	1	A sturdy and RSEB103, heavy unit made of CRC sheet mounted on a heavy angle iron duly powder coated. Capacity of output of water is adjustable through cam system knob provided from 50 ml. to 300 ml. Specification: Hand operated Motorized (Semi Automatic)	
40.	Mechanical Stirrer	2	Mini stirrer with PMDC Motor having Stirring shaft & propeller in SS 316, Digital Speed indicator & speed regulator.	
41.	Melting Point Apparatus	1	RSEB104, Without Capillary and thermometer,	
42.	Tray Drier	1	RSEB105, Inner SS, Outer MS, for 4 Tray	
43.	Distillation Unit S.S	1	RSEB64, Material SS, Capacity- 4 liter.	
44.	Ostwald's Viscometer	15	RSEB106, Borosilicate Glass, Material Glass	
45.	Stalagmometer	15	RSEB107, Material Glass	
46.	Desiccator	5	Type Plain, Size - 6", Material PolyLab	
47.	Suppository Moulds,	20	RSEB108, 4 Mould, Material: Stainless Steel Surface: Smooth	
48.	Buchner Funnels	5	RSEB109, Small, 3" Usage/Application Chemical Laboratory	
49.	Buchner Funnels	5	RSEB110, Medium, 4" Usage/Application Chemical Laboratory	
50.	Buchner Funnels	5	Large, 5" RSEB111, Usage/Application Chemical Laboratory	
51.	Permeability Cup	5		
52.	Filtration Assembly	1	RSEB112, Borosilicate Glass Filter Size 47 mm Stop Cork Funnel Capacity 500 ml	
53.	Anderson's Pipette	3	graduated cylinder, RSEB113, graduation from 0 to 20 cm. and fitted with 10 ml pipette with three way stopcock, the tip of pipette at the level of 0 mark at the cylinder. Material Borosilicate	
54.	Lipstick Moulds,	10	RSEB114, 4 Mould, Material: Stainless Steel Surface: Smooth	


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PACKAGE 10: Pharmaceutical Biotechnology Lab

S No.	Product	Quantity	Specification	Price
1	Orbital Shaker Incubator Heating	1	Temperature range ambient to 70° C.,	
2	Lyophilizer, 3 Litre(Condensate Cap. 6 Tests),	1	The unit has hermetically sealed RSEB116, compressor maintains temperature upto -40°C & -80°C fitted with MICRO PROCESSOR DIGITAL TEMP. INDICATOR-CUM-CONTROLLER. Trap is given at non magnetic stainless steel dished bottom for complete effluent removal. Refrigerant Coils made of Copper are heavily insulated for maximum efficiency in the condensing chamber.Capacity 3 Litre(Condensate Cap. 6 Tests)	
3	Gel Electrophoresis	1	Fixed Height, Made out of thick perspex sheet with fixed upper and lower buffer tanks with 1 comb, 3 spacers, 1 plain glass plate, 1 notched glass plate, clamps, electrode terminals & RSEB117, Platinum ELECTRODES OF 99.9% PURITY.	
4	Phase contrast/Trinocular Microscope	1	standard complete microscope set with Siedentopf Trinocular head, integrated 6V 20W halogen light illuminator, Anti-Fungal coatedPlanAchromatic Objectives 4x,10x,40x (spring) & 100x (oil, spring), paired wide field eyepieces 10x (F.N.20),	
5	Refrigerated Centrifuge	1		
6	Fermenters of different capacity	1		
7	Tissue Culture station	1	RSEB119, Compact model, suitable for use in small Laboratories. Supplied with One S.S. Basket Rotor, One S.S. Tissue Basket, One S.S. Wax Bath, Suitable to work on 220 V, single phase, 50 Hz, Ac supply	
8	Laminar Air Flow	1	RSE-413A1, Horizontal Type, Wooden, 2'x2'x2'	
9	Diagnostic kits to identify infections against	1		
10	Rheometer	1		
11	Viscometer	1	LVDV-E	
12	Micropipette	1	Fixvo II Micropipette - 1000 Capacity - 1000 µl	
13	Sonicator	1	Sizes- 175mmX165mmX190mm (LxWxH), Caps- 1.8ltr, RSEB120,	
14	Respinometer	1		

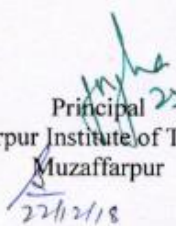
15	BOD Incubator	1	Temp range 5°C to 50°C ± 1°C. Double walled with digital temp-cum-indicator controller, 4cuft, Cap 171ltr, Stainless Steel Chamber	
16	Paper Electrophoresis Unit	1	Paper Electrophoresis Apparatus Horizontal. Unit to accommodate 3 paper Strips. RSEB121, Unit is moulded in single piece to ensure leak proof operation. Made of transparent Polycarbonate. 99.9% pure platinum wire is used in electrode.	
17	Micro Centrifuge	1	max. speed 6000 rpm, supplied with 8 X 1.5 ml	
18	Incubator Water Bath	1	RSEB122, 225 x 275 x 150 m.m. Ambient to 90 Degree	
19	Autoclave, Portable	1	RSEB38, Aluminium chamber, Size 300x300mm (seamless)	
20	Refrigerator	1	225 litres by standard company like Godrej	
21	Filetration Assembly	1	RSEB112, Borosilicate Glass Filter Size 47 mm Stop Cork Funnel Capacity 500 ml	
22	Digital Ph meter	1	RSEB31, Pen Type	


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PACKAGE 11: Central Instrumentation Lab

S No.	Product	Quantity	Specification	Price
1	Colorimeter	1	RSEB123, Digital table Top	
2	Digital Ph Meter	1	RSEB31, Digital table Top	
3	UV-Visible Spectrophotometer	1	RSEB124, Single Beam	
4	Flourimeter	1	RSEB125, Digital table Top	
5	Digital balance	1	CG 203L, (1mg) to 220gm	
6	Nephelo Turbidity meter	1	RSEB126, Digital table Top	
7	Flame Photometer	1	RSEB127, Digital table Top	
8	Potentiometer	1	RSEB128, Digital table Top	
9	Conductivitymeter	1	RSEB129, Digital table Top,	
10	Fourier Transform Infra Red Spectrometer	1	ON Request	
11	HPLC	1	RSEB130, High Pressure Solvent Delivery Pump Multi Wavelength UV-Detector - 190-700nm,	
12	HPTLC(Desirable)	1	ON Request	
13	Atomic Absorption Spectrophotometer	1	RSEB131, Atomic Absorption Spectrophotometer with compressor, Acetylene regulator, Flash Arrestor and 100 mm burner.	
14	Biochemistry Analyser	1	Windows based user friendly interface, Analysis method - End point, kinetics, fixed time, 2 point end absorbance, Optical - 340,405,450,505,546,578,630 nm 2 extra filters are optional., Light source - 6v/10 w halogen lamp, Resolution - 0.0001 abs, Photometric range - 0.0000 ~ 3.0000 abs, Stability < 0.005 abs/hour, Carry over < 0.5 %, Flow cell - µl, Temperature control - Peltier control, room temperature, 25 ° c , 30 ° c & 37 ° c, Memory - 300 programs, 200000 results, Display - 7 “ tftlcd with touch screen, Printer - Build in thermal printer Interface - 4 usb slave, 1 usb host, 1 Ethernet port, Power requirement - Wide power supply ac – 100 – 240 v, 50/60 hz., Keyboard - Connectivity	

16	Deep Freezer	1	Double walled with inner chamber made of S.S/Plastic & outer of thick PCRC duly enamel painted. Temp. range from ambient to -20°C is achieved by hermetically sealed compressor. The gap between the inner & outer wall is filled with high grade PUF insulation to avoid thermal loss. Body is mounted on a sturdy angle iron frame & is mounted on castor wheels. Unit is fitted with Micro Processor Digital Temperature Indicator-cum-controller. Horizontal Chest type models are supplied in a single compartment whereas vertical models are supplied with three storing shelves.
17	Ion Exchanger	1	RSEB104, Capacity 300L/H Category Water treatment Tank material Plexiglass
18	Lyophilizer, 3 Litre(Condensate Cap. 6 Tests),	1	The unit has hermetically sealed RSEB116, compressor maintains temperature upto -40°C & -80°C fitted with MICRO PROCESSOR DIGITAL TEMP. INDICATOR-CUM-CONTROLLER. Trap is given at non magnetic stainless steel dished bottom for complete effluent removal. Refrigerant Coils made of Copper are heavily insulated for maximum efficiency in the condensing chamber. Capacity 3 Litre(Condensate Cap. 6 Tests)


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PACKAGE 12: Furniture for Library

S No.	Product	Quantity	Specification	Price
1	Chair	37	Supply of multipurpose Chair for Library from standard Company like Goderej, Promark, etc	

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PACKAGE 13: Conference room

S No.	Product	Quantity	Specification	Price
1	Godrej conference table (Cinet)	38	Godrej Senate Conference table for 32 persons top thickness 31.6 (18mm +12mm+0.6mm DL(both sides +0.4mm membrane) edge profile waterfall edge 10mm radius on top edge and 5mm at bottom. Legs-Made from 25mm PPB having a straight profile with half round edges and cladwith 0.6mm thick Post Forming laminate. Overall thickness of leg is 26.2mm. Modesty Panel Made from PLT(Prelaminated Twin) boards of 18mm thick. Skin PVC membrane foil (0.4mm thk) clad on the substrate MDF using PU glue for better adhesion. This foil is pre-coated with layer of polyurethane for better scratch resistance. Single Seater 760 W x 600 d, two seater 1360 Wx 600 D, Half Round (2 seater)-R 713, Quarter Round (1 Seater)-R 713	
2	Conference Revolving chair	38	Supply of multipurpose Chair from standard Company like Goderej, Promarketc	
3	Conference Visitor chair	28	Supply of multipurpose Chair from standard Company like Goderej, Promarketc	
4	Ahuja Conference Mic. System	38		
5	Office chair	60	Supply of multipurpose Chair from standard Company like Goderej, Promarketc	
6	Office table	60	Supply of multipurpose Table from standard Company like Goderej, Promarketc	


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4. INSTRUCTION TO BIDDERS (ITB)

1) Sale of Bidding/ Tender Documents

- a) The sale of bidding documents shall be commenced from the date of publication of Notice Inviting Bids (NIB) and shall be stopped one day prior to the date of opening of Bid. The complete bidding document shall also be placed on the State Public Procurement Portal and e-Procurement portal <https://www.eproc.bihar.gov.in/BELTRON>. The prospective bidders shall be permitted to download the bidding document from the websites and pay its price while submitting the Bid to the procuring entity.
- b) The bidding documents shall be made available to any prospective bidder who pays the price for it by bank demand draft
- c) Bidding documents purchased by Principal of any concern may be used by its authorized representative.

2) Changes in the Bidding Document

- a) At any time, prior to the deadline for submission of Bids, the procuring entity may for any reason, whether on its own initiative or as a result of a request for clarification by a bidder, modify the bidding documents by issuing an addendum in accordance with the provisions below.
- b) In case, any modification is made to the bidding document or any clarification is issued which materially affects the terms contained in the bidding document, the procuring entity shall publish such modification or clarification in the same manner as the publication of the initial bidding document.
- c) In case, a clarification or modification is issued to the bidding document, the procuring entity may, prior to the last date for submission of Bids, extend such time limit in order to allow the bidders sufficient time to take into account the clarification or modification, as the case may be, while submitting their Bids.
- d) Any bidder, who has submitted his Bid in response to the original invitation, shall have the opportunity to modify or re-submit it, as the case may be, within the period of time originally allotted or such extended time as may be allowed for submission of Bids, when changes are made to the bidding document by the procuring entity: Provided that the Bid last submitted or the Bid as modified by the bidder shall be considered for evaluation.

3) Period of Validity of Bids

- a) Bids submitted by the bidders shall remain valid during the period specified in the NIB/ bidding document. A Bid valid for a shorter period may be rejected by the procuring entity as non-responsive Bid.
- b) Prior to the expiry of the period of validity of Bids, the procuring entity, in exceptional circumstances, may request the bidders to extend the bid validity period for an additional specified period of time. A bidder may refuse the request and such refusal shall be treated as withdrawal of Bid and in such circumstances bid security shall not be forfeited.

- c) Bidders that agree to an extension of the period of validity of their Bids shall extend or get extended the period of validity of bid securities submitted by them or submit new bid securities to cover the extended period of validity of their bids. A bidder whose bid security is not extended, or that has not submitted a new bid security, is considered to have refused the request to extend the period of validity of its Bid.

4) Format and Signing of Bids

- a) Bidders must submit their bids online at eProcurement portal i.e. <http://eproc.bihar.gov.in/BELTRON>
- b) All the documents uploaded should be digitally signed with the DSC of authorized signatory.
- c) A Two part/ cover system shall be followed for the Bid: -
 - a. Technical Bid, including fee details, eligibility & technical documents
 - b. Financial Bid

5) Cost & Language of Bidding

- a) The Bidder shall bear all costs associated with the preparation and submission of its Bid, and the procuring entity shall not be responsible or liable for those costs, regardless of the conduct or outcome of the bidding process.
- b) The Bid, as well as all correspondence and documents relating to the Bid exchanged by the Bidder and the procuring entity, shall be written only in English Language. Supporting documents and printed literature that are part of the Bid may be in another language provided they are accompanied by an accurate translation of the relevant passages in English/ Hindi language, in which case, for purposes of interpretation of the Bid, such translation shall govern.

6) Bid Security (EMD): Every bidder, if not exempted, participating in the procurement process will be required to furnish the bid security as specified in the NIB.

- a) In lieu of bid security, a bid securing declaration shall be taken from Departments of the State Government, Undertakings, Corporations, Autonomous bodies, Registered Societies and Cooperative Societies which are owned or controlled or managed by the State Government and Government Undertakings of the Central Government.
- b) Bid security instrument or a bid securing declaration shall necessarily accompany the technical bid.
- c) Bid security of a bidder lying with the procuring entity in respect of other bids awaiting decision shall not be adjusted towards bid security for the fresh bids. The bid security originally deposited may, however, be taken into consideration in case bids are re-invited.
- d) The bid security may be given in the form of a demand draft, in specified format, of a scheduled bank. The bid security must remain valid thirty days beyond the original or extended validity period of the bid.
- e) The issuer of the bid security and the confirmer, if any, of the bid security, as well as the form and terms of the bid security, must be acceptable to the procuring entity.

- f) Prior to presenting a submission, a bidder may request the procuring entity to confirm the acceptability of proposed issuer of a bid security or of a proposed confirmer, if required. The procuring entity shall respond promptly to such a request.
- g) The bid security of unsuccessful bidders shall be refunded soon after final acceptance of successful bid and signing of Agreement and submitting performance security.
- h) The Bid security taken from a bidder shall be forfeited, including the interest, if any, in the following cases, namely: -
 - a. when the bidder withdraws or modifies its bid after opening of bids;
 - b. when the bidder does not execute the agreement, if any, after placement of supply/ work order within the specified period;
 - c. when the bidder fails to commence the supply of the goods or service or execute work as per supply/ work order within the time specified;
 - d. when the bidder does not deposit the performance security within specified period after the supply/ work order is placed; and
 - e. if the bidder breaches any provision of code of integrity, prescribed for bidders, specified in the bidding document.
- i) Notice will be given to the bidder with reasonable time before bid security (EMD) deposited is forfeited.
- j) No interest shall be payable on the bid security (EMD).
- k) In case of the successful bidder, the amount of bid security may be adjusted in arriving at the amount of the Performance Security, or refunded if the successful bidder furnishes the full amount of performance security.
- l) The procuring entity shall promptly return the bid security after the earliest of the following events, namely:-
 - a. the expiry of validity of bid security;
 - b. the execution of agreement for procurement and performance security is furnished by the successful bidder


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5. OTHER ITEMS

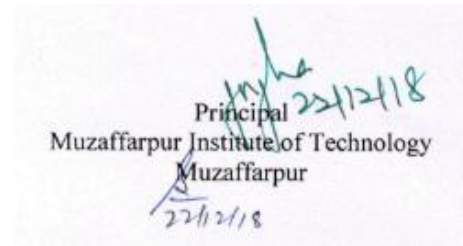
1. Renovation & Furnishing of Lab as per requirement to establish the Lab.
2. AMC charges after 2years warranty

AMC	Price
3 rd Year	
4 th Year	
5 th Year	

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6. PAYMENT TERMS

- On Delivery, Installation, Demonstration and Manual Submission: - 90%
- Satisfactory Acceptance: - 10%
- 5% Performance security in terms of Bank Guarantee



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ANNEXURE-1: BIDDER'S AUTHORIZATION CERTIFICATE {to be filled by the bidder}

To,
{Procuring entity},

_____,

I/ We {Name/ Designation} hereby declare/ certify that {Name/ Designation} is hereby authorized to sign relevant documents on behalf of the company/ firm in dealing with NIB reference No. _____ dated _____. He/ She is also authorized to attend meetings & submit technical & commercial information/ clarifications as may be required by you in the course of processing the Bid. For the purpose of validation, his/ her verified signatures are as under.

Thanking you,

Name of the Bidder: -

Verified Signature:

Authorised Signatory: -

Seal of the Organization: -

Date: _____

Place: _____

ANNEXURE-2: SELF-DECLARATION {to be filled by the bidder}

To,

{Procuring entity},

In response to the NIB Ref. No. _____ dated _____ for
{Project Title}, as an Owner/ Partner/ Director/ Auth. Sign. of
_____, I/ We hereby declare that presently our Company/
firm _____, at the time of bidding, :-

- a) possess the necessary professional, technical, financial and managerial resources and competence required by the Bidding Document issued by the Procuring Entity;
- b) have fulfilled my/ our obligation to pay such of the taxes payable to the Union and the State Government or any local authority as specified in the Bidding Document;
- c) is having unblemished record and is not declared ineligible for corrupt & fraudulent practices either indefinitely or for a particular period of time by any State/ Central government/ PSU/ UT.
- d) does not have any previous transgressions with any entity in India or any other country during the last three years
- e) does not have any debarment by any other procuring entity
- f) is not insolvent in receivership, bankrupt or being wound up, not have its affairs administered by a court or a judicial officer, not have its business activities suspended and is not the subject of legal proceedings for any of the foregoing reasons;
- g) does not have, and our directors and officers not have been convicted of any criminal offence related to their professional conduct or the making of false statements or misrepresentations as to their qualifications to enter into a procurement contract within a period of three years preceding the commencement of the procurement process, or not have been otherwise disqualified pursuant to debarment proceedings;
- h) does not have a conflict of interest as mentioned in the bidding document which materially affects the fair competition.
- i) will comply with the code of integrity as specified in the bidding document.

If this declaration is found to be incorrect then without prejudice to any other action that may be taken as per the provisions of the applicable Act and Rules thereto prescribed by GoR, my/ our security may be forfeited in full and our bid, to the extent accepted, may be cancelled.

Thanking you,

Name of the Bidder: -

Authorised Signatory: -

Seal of the Organization: -

Date: _____

Place: _____

ANNEXURE-3: CERTIFICATE OF CONFORMITY/ NO DEVIATION {to be filled by the bidder}

To,
{Procuring Entity},

_____.

CERTIFICATE

This is to certify that, the specifications of BOQ which I/ We have mentioned in the Technical bid, and which I/ We shall supply if I/ We am/ are awarded with the work, are in conformity with the minimum specifications of the bidding document and that there are no deviations of any kind from the requirement specifications.

Also, I/ we have thoroughly read the bidding document and by signing this certificate, we hereby submit our token of unconditional acceptance to all the terms & conditions of the bidding document without any deviations.

I/ We also certify that the price I/ we have quoted is inclusive of all the cost factors involved in the end-to-end implementation and execution of the project, to meet the desired Standards set out in the bidding Document.

Thanking you,

Name of the Bidder: -

Authorised Signatory: -

Seal of the Organization: -

Date: _____

Place: _____