



भारतीय पैकेजिंग संस्थान
Indian Institute of Packaging

An autonomous body under the Ministry of Commerce & Industry, Govt. of India

Plot E-2, MIDC Area, Andheri (East), Road No.8, Post Box No.9432, Mumbai -
400093

Tel:022-28219803/9469/6751 Email: iip@iip-in.com, Website: www.iip-in.com

IIP/Mumbai/Admin/Tender/2020-21

Dated: 07/05/2020

Tender Notice No. 2020/04 (Phase - 1)

Tender Notice for Procurement of Laboratory Equipment, IT Equipment & Library Books for IIP Head Office & Regional Centres.

Indian Institute of Packaging (IIP) an autonomous body under Ministry of Commerce & Industry, Government of India invites tender bids from approved, authorised and eligible manufactures/dealers.

Interested Service Providers can download tender document from IIP website (www.iip-in.com) and forward their Quotation/Proposal/Bid as per specifications/requirements mentioned in the tender document in two separate envelopes for technical bid and commercial bid super scribed "Tender Bid for Annexure I / II / III" on or before 12th June, 2020 up to 4:00 p.m. addressed to Assistant Director (General Administration & IT), Indian Institute of Packaging, Plot E-2, MIDC Area, Andheri East, Road No.8, Post Box No. 9432, Mumbai – 400093.

For any technical queries, you may address your email to Dr. Babu Rao Guduri on rd4@iip-in.com.

Companies should submit their Company Profile, Client List, Turnover for last three years, Audited Financial Statement including Audit Report for last three years.

IIP reserves the right to accept or reject any or all of the tenders/bids received by it either in part or full relating to the work under this tender document without assigning any reason whatsoever.

IIP may also withdraw or cancel the tender at its sole discretion. IIP also does not bind itself to accept the lowest bid. The bids will be finalized or shortlisted by the Institute on the basis of competitive pricing offered and quality of service agreed to be provided by the agency.

IIP reserves the right to negotiate the quoted price with the successful bidder.

Any clarification or query in this regard may be emailed to Assistant Director (GA & IT) on iip@iip-in.com.

Afsha Siddiqui
Asst. Director (General Admin. & IT)
Indian Institute of Packaging (IIP)

About the Institute

Indian Institute of Packaging (IIP) is an autonomous body under the administrative control of the Department of Commerce, Ministry of Commerce & Industry, Government of India. Indian Institute of Packaging (IIP) engaged in Research and Development, imparts Post-Graduate Education Program in Packaging Technology, undertakes testing and evaluation of packages, consultancy etc. IIP also offers large number of short terms and long-term professional courses for junior, middle and senior level executives for the executives/Officers of Govt. as well as Corporate Sectors. It also organizes National/International Seminars and Conferences in the field of Packaging.

Instruction to Bidders and General Terms & Conditions:

- Interested Service Providers can download the tender document from IIP website (<https://iip-in.com/>) to submit their bid as per specifications/requirements mentioned in the tender document.
- Interested service providers can submit their bid for one or more or all equipment in separate sealed envelope.
- Copy of Audited Balance Sheet for the last three years ending 31.03.2019 along with Audit Reports.
- Copy of Income Tax Return (ITR) for last 3(three) years ending 31.03.2019.
- Copy of PAN, GST Registration Certificate, Service Tax Registration Certificate.
- As a proof of experience, bidders should submit copies of contracts/orders along with the Successfully Execution Certificate from Government Organizations/PSUs/Reputed Private Industrial Establishments for the last three years.
- Copy of any Valid Current License/Certificate for Engagement in the same business issued by any other Appropriate Authority.
- Offers submitted by Fax/email will not be considered.
- Price Bid should include quantities of item, unit rates, total cost with all applicable taxes, duties, fees, levies, freight, transportation cost and any other charges except GST. GST component if applicable to be shown separately and will be paid extra, if applicable. All applicable taxes, duties, fees, levies, freight, transportation cost payable by the bidder/contractor under the contract or any other cause shall be included in the quoted prices. (All rates to be given in INR).
- Turnover of the participating should be 10 Crores in INR per year.
- Five years comprehensive warranty and onsite support required for all the products.
- Implementation, Configuration, Testing & Training to be provided to IIP users.

- Implementation and project completion three weeks from date of delivery.
- Validity of Tender is 60 (Sixty) days, the bid shall remain valid for a period of two months from the date of opening of tender or for a further period, if mutually accepted.
- Delivery: The delivery of goods/items/services should be made by the bidder as per the specifications/configurations/terms & conditions specified by IIP in the Purchase/Work Order. The delivery of goods/items/services should be made within 12 weeks from the date of issue of Purchase Order. The supplier shall warrant that goods/items/services to be supplied shall be in full conformity with specifications. In case the goods/items/services are not as per specifications, the same will not be accepted. The firm will have to replace the goods/items as per the actual specifications and requirement. IIP will not be responsible for any loss occurred for this to the supplier/firm/agency/bidder.
- IIP reserves the right to accept or reject any or all of the tenders/bids received by it either in part or full relating to the work under this Tender Document without assigning any reason whatsoever.
- The Institute has the right to split the scope of work to more than one agency without assigning any reason whatsoever. No claim will be entertained on account of this.
- IIP may also withdraw or cancel the tender either in part or in full to its sole discretion. IIP also does not bind itself to accept the lowest bid.
- IIP reserves the right to negotiate the quoted price with the successful bidder.
- Security deposit will be payable only by selected/approved bidder. The security deposit will be decided by the Institute based on the cost of the contract.
- Pre-Qualification Bid: The tenderer/bidder should submit pre-qualification documents as per Annexure A and Annexure-B on Company Letterhead with signature of authorized signatory and company stamp as tender acceptance & price bid undertaking.
- Payment against cost of delivered items and balance after successful completion of the project.
- **Payment Terms:** Payment will be made based on the certification of IIP Officials on part (as Running Account Bill) or full satisfactory completion of work. No Advance Payment will be made.
- Payment will be made within 30 days of submission of invoice, provided the same is complete and duly authenticated by the specified Officer(s) of IIP (after submission of report for successful completion of the entire work received from the concerned Officer). Payment will be made by E-payment/NEFT/RTGS after deducting the TDS as applicable under IT & GST.
- **Rejection of Tender (s):** IIP reserves the right to reject any or all the bids either in part or full relating to the work under this Tender Document without any reason whatsoever. IIP reserves

the right to accept or reject any or all tenders received by it without assigning any reason whatsoever. IIP may also withdraw or cancel the tender either in part or in full to its sole discretion. IIP also does not bind itself to accept the lowest bid.

- **Error in Tender submission:** IIP does not take any responsibility for the tender being wrongly submitted in the e-procurement portal and malfunction of the system at bidder's end or not received in the portal by the stipulated date and time.
- **Authorization:** Bidder signing the tender form or any other documents forming part of the contract on behalf of the Bidder shall be deemed to warranty that he has authority to bind the Bidder. If subsequently comes to light that the person so signed had no authority to do so, IIP may without prejudice to any other civil & criminal remedies cancel the tender and hold the Bidder liable for all costs, charges and damages.
- **Conditional Bids:** Conditional tenders/bids based on the process / basic schemes other than mentioned and /or not conforming to the technical specifications / requirements of the Bidding documents will not be considered. Conditional tenders shall be straightway rejected and no additional clause will be entertained.
- **Compliance of statutory obligations:**
 - The bidder will be required to comply with all statutory obligations from time to time applicable to this contract. In the event of violation of any contractual or statutory obligations by the bidder, the bidder shall be fully and solely responsible for the same. Further, in the event of any action, claim, damages, suit initiated against IIP by any individual, agency or government authority due to acts of the bidder, the bidder shall be liable to make good / compensate such claims or damages to the IIP. As a result of the acts of the bidder, if IIP is required to pay any damages to any individual, agency or government authority, the bidder would be required to reimburse to IIP such amount along with other expenses incurred by IIP or IIP reserves the right to recover such amount from the payment(s) due to the bidder while settling its bills.
 - Award/Assignment of work: Bid qualifying technically and financially (L1).
 - The decision of the competent authority will be final and binding to all for interpretation of any ambiguity.
 - Hardcopies of documents required as per below given details to be submitted by the bidder.
 - Bidder is required to fill-up this checklist given below as Annexure A which is as follows:

Annexure A		
Sr.No.	Item Description	Yes/No
1	Copy of Certificate	
2	Copy of PAN Card	
3	Copy of GSTIN (GST Registration) Certificate	
4	Contact Details	
5	Relevant documents to be uploaded as a proof that the firm is in business for the period mentioned	
6	The firm should be in similar type business for at least FIVE years as on 31.03.2020. The right to accept contracting business of the bidder/vendor will rest with IIP.	
7	Please attach Chartered Accountant's Certificate.	
8	Chartered Accountant's Certificate for turnover of period mentioned.	
9	The average annual turnover of the firm in last three consecutive financial years as on 31.03.2019 (For Assessment Year 2016-17, 2017-18 and 2018-19)	
10	Chartered Accountant's Certificate for Net Profit (Profit Before Tax) as per the period mentioned below	
11	The bidder must be a profit-making organization in last three consecutive financial years as on 31.03.2019 (For Assessment Year 2016-17, 2017-18 and 2018-19)	
12	Annexure-B on Company Letterhead as tender acceptance & Price	
13	Bid undertaking.	
14	Technical and Price Bid to be submitted in two separate envelopes	
15	(MAF) Manufacturer authorisation certificate from OEM for VC, Server, Storage, Backup & LAN Switches	

Annexure B

Tender Acceptance Letter & Price Bid Undertaking

(To be given on Company Letter Head)

Date:

To,

Indian Institute of Packaging
Plot E2, MIDC Area, Andheri East,
Road No. 8, Post Box. No. 9432

Mumbai 400093

Sub: Acceptance of Terms and Conditions of Tender & Price bid under taking.

Tender Reference No: _____

Dear Sir,

We have downloaded / obtained the tender document(s) for the above mentioned 'Tender/Work' from the website(s) namely: www.iip-in.com

Name of Tender: _____ as per your advertisement, given in the above-mentioned website(s).

We hereby certify that:

1. We have read the entire terms and conditions of the tender documents (including all documents like annexure(s), schedule(s), etc.), which form part of the contract agreement and I / we shall abide hereby by the terms / conditions / clauses contained therein.
2. We offer to work at the rates as indicated in the Price Bid, inclusive of all applicable taxes except GST component and GST if applicable will be paid extra.
3. We do hereby declare that our Firm has not been blacklisted/debarred by any Govt. Department/Public sector undertaking and there has been no litigation with any Government department on account of these services.

We certify that all information furnished by our firm is true & correct and, in the event, that the information is found to be incorrect/untrue or found violated, then IIP shall without giving any notice or reason therefore or summarily reject the bid or terminate the contract, without prejudice to any other rights or remedy including the forfeiture of the full said earnest money deposit absolutely.

Yours Faithfully,

(Signature of the Bidder, with Official Seal)

Indian Institute of Packaging

Tender Invitation Notice (Phase-I)

List of Laboratory Equipment

S.No	Name of the Equipment	Qty	Technical Specification	Location
1	Inclined Impact Tester	1	<ul style="list-style-type: none"> • Max. Payload 200 KG • Max.Impact Velocity 2.8 m/s • Max.Shock Distance 5M • Max.Size of Specimen 1200*1200*1600mm • Sliding Trolley 600*550*2500mm • Impact Base Size 1800*2000mm • Power Voltage 3φ 380V 50/60Hz • Test Standards JB/T6868-93 ISO2248-1972(E) • The equipment should have: Flexible positioning electric pulley, easy to fix the position, to achieve the required speed change value. Hydraulically operated for inclined angle of 10° Reinforced impact resistant plate to ensure firm structure. Conforming to Standard IS 7028 Part 3 and ASTM D 880 	Ahmedabad

2	Vibration Tester	<p>Technical Specifications:</p> <ul style="list-style-type: none"> • Varying frequency of vibration using the panel box from 2Hz to 6 Hz • Pay load capacity 1500 kg • Table top 1500 mm x 1500 mm • Fixed amplitude of 25mm, which is generated using cam assembly • 0-99 hours programmable timer is provided for test duration • PC based Monitoring and control available with data logging facility <p>2 Applications: For simulating the Road condition and handling of packages:</p> <ul style="list-style-type: none"> • testing of IBC containers • testing of drums • testing of packages • testing of defence equipments/components • Conforming to Standards IS 7028, and ASTM D999, ISO 2247 • Calibration certificate from NABL accredited laboratory • Three years warranty plus five years AMC after the warranty period 	Delhi Ahmedabad
3	Salt Spray Tester	<p>Internal Size: 1600 x 700 x 800 mm Temperature Range: Ambient to 45 °C Temperature Accuracy: ±1 °C Temperature Control: Solid State Digital Programmable Temperature Controller cum indicator with special Zero Corrosion sensor Air Regulator: A moisture cum oil filter and air regulator ranging from 0 to 30 psi Construction: FRP- Fibre Reinforced Plastic; Double Walled (with glasswool insulation) Should be equipped with Air purging, Time totaliser, Cyclic timer, Regulators, Gauges and Specimen racks Conforming to Standards: ASTM B 117 -11; IS 5528; IS 6910</p> <p>3</p>	Mumbai Hyderabad Ahmedabad

4	Smoothness & Porosity Tester	3	<ul style="list-style-type: none"> • Measuring range: 5-3000 ml/min • Measuring accuracy: $\pm 0.5\%$ of the final value • Accuracy of test duration: ± 0.5 s • Able to Calculate mean and Standard deviation automatically • Conforming to Standards IS 9894, TAPPI T-251, ASTM D-737 and ISO 5636/1 • Should be able to measure the porosity (or air-permeability) of materials like non-woven or woven textiles, filter and cloth felts, some types of blotting, saturating and absorbent bag papers, meshes, etc. • Calibration certificate from NABL accredited laboratory <p>Three years warranty plus five years AMC after the warranty period</p>	Mumbai Chennai Ahmedabad
5	Gloss Meter for Paper and Paper Board at 75 deg & 20 Deg (Specular gloss of paper and paperboard at 75 degrees) - Imported	4	<p>Measurement Range: 0-2000 GU (Gloss Units) Repeatability: 0.2 GU (Gloss Units) Reproducibility: 0.5 GU (Gloss Units) Angles: 200 , 600, 850 Conforming to Standards ASTM D 523, ASTM D 2457, ASTM E 430, ISO 2813, ISO 13803, DIN 67530</p>	Delhi Hyderabad Kolkata Ahmedabad
6	Semi-micro Weighing Balance with least count 0.01 mg	2	<ul style="list-style-type: none"> • Weighing Capacity: Up to 220 grams • Accuracy: 0.00001 g (0.01 mg) • Range of External Weights for Calibration: 10-220 g • Repeatability: ≤ 0.00001 g • Linearity: ± 0.00002 g • Response Time: 3 seconds • Ambient Temperature: 5-50 °C • Pan Size (approx.): F100 • Main body dimensions (approx.): 200(W)x290(D)x240(H) • Display: LED with backlight, excellent, high-contrast, easy-to-read display, with large digits • All-glass draft shield, with smooth-action doors that open extremely wide. • Built-in, motorized calibration weight • Shall comply with the standard IS 9281 (Part 3) • Calibration certificate from NABL accredited laboratory <p>Three years warranty plus five years AMC after the warranty period</p>	Ahmedabad Mumbai

7	UTM Machine	1	<p>Load cell capacity 50kN Total Cross-head Movement (mm) 1000 Or 1100 Precision reducers, ball screws which significantly reduce the noise and transmission losses while increasing the transmission efficiency. The seal plate mining anode hardening protects the ball screw and increase service life and precision of the instrument. Load cell memory lock function which memorizes various parameters. Plug and play load cell. When using the external I/O signal contact various functions can be expanded. Jog control and very easy for operation of machine Many relevant tests can be performed with optional grips and extensometer of fixtures.</p>	Mumbai
8	Water Activity Meter	1	<p>Water activity: Range: 0.030 –1.000 aw; Resolution: 0.0001 aw; Accuracy: ±0.003 (4TE dew point) ±0.015 (4TEV capacitance); Repeatability: 0.001 aw</p> <p>Temperature: Range: 15-50 °C; Resolution: 0.01 °C; Accuracy: ±0.1 °C Read Time: ~5 min</p> <p>Dimensions: Length: 26.7 cm (10.5 in) Width: 17.8 cm (7.0 in) Height: 12.7 cm (5.0 in)</p> <p>Operating temperature: Minimum: 4 °C Maximum: 50 °C</p> <p>Power : 110–220 VAC 50/60 Hz</p> <p>COMPLIANCE: Complies with ISO 18787:2017 Manufactured under ISO 9001:2015 EM ISO/IEC 17050:2010 (CE Mark)</p>	Mumbai

9	Environmental / Humidity Chamber (Walk-in - Type)	3	Hyderabad Chennai (2)
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Capacity -15000 Liter
 Inner chamber MOC - Stainless steel 304
 Outer chamber MOC - Stainless steel 304
 Tray Size, Qty and MOC - 48 No's of Stainless steel; Size: 725 x 800 mm
 Door with lock and key arrangement - Required
 Observation window - Size 300 x 300 mm
 PUF Insulated Pre-fabricated panel which Can be easily assembled at site with 80 mm PUF thickness Illumination-Fluorescent tube light
 Inside chamber - Required

Process Requirement
 Temperature range - 20 to 60 °C
 Temperature Accuracy - ± 0.2 °C
 Temperature Uniformity - ± 1 °C
 Humidity Range - 40% to 95% RH
 Humidity Accuracy - $\pm 2\%$ RH
 Humidity Uniformity - $\pm 3\%$ RH
 Automatic Control of temperature and humidity :Required
 Auto start after recovery of power as per set parameters :Required
 Fully integrated PLC control system. Total system controlled by PLC with data storage of up to 1000 readings (i.e. if date-logging interval is of 30 mins then date upt 20 days is to be stored on the PLC itself) : PLC make allan bradly (Prefered)

Data storage to be inbuilt in the PLC itself without additional external hardware

Facility to send emails from PLC in case of deviation from set values : Required
 HMI: 4" Colour Touch Screen Display : Required
 Alarms for deviation required for : Required
 Temperature all sensors (High & Low)
 Humidity all sensors (High & Low)

Other required alarms for
 Door opening
 Chamber mains supply failure
 Chamber water supply failure
 Emergency alarm (man inside)
 Componenet failure, circuit failure

Forced air circulation to maintain uniformity
 Required

10	WVTR Tester (Imported)	<p>Water Vapour Transmission Rate Tester, capable of detecting WVTR transmission through plastic films, laminated films, sheets as well as various materials used in food packaging applications. The instrument should also be capable of detecting water vapour transmission rate through PET bottles, retort pouches and other food packages.</p> <ul style="list-style-type: none"> • Compliance Standards: New ASTM F3299, ASTM F1249, ISO 15106-3, DIN 53122-2. • Two test chambers. • Precise temperature control on each chamber: 10 Deg. C to 40 Deg. C. • Automatic gas flow control and precise humidity control on the wet side, 20% - 90%. • Measurement range: 0.005 to 1000 g/m²/day. • Sample Size: 50 cm² & 100 cm² • Carrier Gas Requirement: 100% Dry N₂. • Windows software. • Grease or Film Sealant. • Nitrogen Purifier. • Calibration Film for low range and high range. • Analytical systems manufactured traceable to NIST. • System validation with certified gas or film for speed and convenience. • Flow, temperature and humidity control for ultimate responsiveness and repeatability. • Minimum two NIST calibration films to be supplied along with the equipment. • HP, Dell, IBM branded PC with Licensed Windows Software and Laser Printer. <p>Intuitive Windows based software. Operating Manual.</p>	Chennai
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11	FT-IR with Microscope and Accessories	<p>4</p> <ul style="list-style-type: none"> Ø The instrument must be sealed and desiccated optical unit. Vibration isolated base plate. Ø Offered system must be capable to use without any purging gas for sample compartment/optics/detector Ø Wavelength range : Must be minimum 7500 cm-1 to 400 cm-1 Ø Spectral resolution : Must be minimum 0.5 cm-1 or better Ø Wavelength precision : 0.01 cm-1 at 3,000 cm-1 Ø Wavelength accuracy : 0.1 cm-1 at 3,000 cm-1 Ø Signal to Noise Ratio : 48,000:1 or above peak-peak, 1 minute Ø Interferometer : Rotary Michelson interferometer for fast scanning, self-compensating for dynamic alignment changes due to a tilt and shear, incorporating high-reflectivity.. Ø Source : Long-life source with hot-spot stabilization. Must be user replaceable. Ø Beam splitter: Multilayer KBr for the study of metal oxides and metal Halides Ø Instrument must have Optics Guard system for extended desiccant life and additional optical component protection. Ø Instrument must have Atmospheric Compensation to minimize effect of atmospheric water and CO2 on the sample spectra without the need for reference or calibration spectra. Ø The instrument must have provision to attach the third party PIKE, SPECAC, etc. accessories ATR, HATR, etc. Ø Software : A single software platform incorporates all of the functions required for infrared analyses, Such as spectral comparison algorithm and Euclidean searching instrument control, data manipulation and analysis, and flexible report utilities, Ø Imported Portable De humidifier to be supplied. Ø Instrument should be capable to interface with TGA for Evolved Gas Analysis and IR microscope. Ø Installation & demonstration: Free of Cost. Ø Operative and service manuals to be 	<p>Mumbai Delhi Hyderabad Kolkata</p>
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supplied.

Ø IR spectral library to be provided.

Ø Instrument must be quoted with ATR with diamond Crystal

Ø Germanium Crystal for ATR accessory to be quoted for Black Samples.

12	TGA - Analyser	<p>1</p> <ul style="list-style-type: none"> • The instrument must operate to temperatures upto 1200 °C or more with scan rates of 500 °C/min or better. • The TGA should have Ultra Microbalance with 0.1 µg sensitivity and weighing precision better than 0.001%. and must be environmentally controlled (temperature and inert gas). • The Weighing range should be upto 1300 mg or better including pan weight. • The system should have Low Thermal Mass Furnace with built-in Platinum or similar heating element which is resistant to inert and oxidative gas over the full temperature range. The furnace should have facility of auto-calibration, auto-clean furnace etc. • The system must have the ability to operate in a vacuum to 10⁻⁵ Torr and should have capability to use various types of inert and active gases. The provision of ion spray to avoid static charge should be available. • The Furnace should cool down to room temperature from 1100 °C in 15 minutes or better. • It must have a clear tube surrounding the furnace for visual observation of the sample area. • The Gas control should be mass flow control (balance purge and sample purge) and must be able to changeover from one gas to another in less than 3 minutes. • The Balance assembly should have thermostating capability to minimize isothermal drift. • It should be supplied with platinum as well as ceramic pans (5 qty. each). • The movement of furnace should be software controlled. Furnace should be protected with chamber sleeve to avoid convection effects. 	Mumbai
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		<ul style="list-style-type: none"> • In future, TGA should have the capability to upgrade with FT-IR or GC-MS combination for EGA (Gas Evolved Analysis). <p>CONTROL AND SOFTWARE</p> <ul style="list-style-type: none"> • The system should be supplied with licensed software and Branded PC (i5 or better) and Colour Laser-Jet Printer. • The Software should be Multitasking, Multiuser with capability of handling multiple analyser simultaneously. • The Software should be using MS-Windows Environment and should have all the parameters for Instrument Control, Method storage, Multi Ramp capabilities etc. • The Software must have a real time reference curve capability • The Software must have real time calculation capability • The Software must be able to save several different data files into one file • The software package must include 28 curve types, 5 mathematical operations and 16 calculation options for Thermal Analysis, Autostepwise TGA, Variable Rate TGA, Decomposition Kinetics etc. 	
13	Modular DSC	<p>1</p> <p>Heat Flow Measurement Method - Heat flux Temperature Range -150 to 725°C DSC Measurement Range ±100 mW RMS noise / Sensitivity 0.05 µW / 0.1 µW</p> <p>Scanning Rate 0.01 ~ 100°C/min</p>	Delhi

14	Gloss Meter for Plastic and Coating Materials	1	Resolution 0.1GU • Repeatability ± 0.2 GU • Reproducibility ± 0.5 GU Resolution 0.1GU • Repeatability $\pm 0.2\%$ • Reproducibility $\pm 0.5\%$ Measurement range: 20°: 0-2000GU 60°: 0-1000GU 85°: 0-199GU Standards: ISO 2813, ISO 7668 ASTM D523, ASTM D2457	Delhi
15	Overall Migration Testing system (Automatic)	1	Test Range: 0.3 ~ 80000 mg Resolution: 0.1 mg Repeatability, mg: 0.3 Test Temperature: Room Temperature ~ 130 °C Temperature Accuracy: ± 0.5 °C Additional Functions: Fast Evaporation Mode, Reagent Recycling Function, Acid, Alcohol & Alkane Test, Extended Working Station with independent weighing system Test Cup Capacity: 200 ml (approx.)	Hyderabad
16	Bursting Strength Tester (digital)	2	Range: Upto 60 kg/cm ² Least Count: 0.01 kg/cm ² Clamp: Pneumatic The diaphragm used in the equipment should be 0.35-0.45 mm thick and the pressure required to bulge the diaphragm 5 mm above the top plane of the lower clamping surface of the test instrument should not be more than 0-07 kg/cm ² Conforming to standards ASTM D 3786 and IS 1060 Part 1	Mumbai Hyderabad
17	Puncture Resistance Tester (digital)	2	To measure Puncture Resistance of various packaging materials like paper & corrugated boards/boxes etc. Micro Processor-based control panel; digital display Conforming to Standards IS 4006 (Part-II), IS 2771 (Part II), TAPPI T 803 om-99	Mumbai Hyderabad

18	Folding Endurance Tester (Schopper Type)	3	<p>Specimen Size: 15 x 150 mm Counter: 0-999,999 Load Precision: ± 0.5 Folding Angle: $135 \pm 0.5^\circ$, $90 \pm 0.5^\circ$ Speed: Variable - From 20 cpm to 175 ± 10 cpm Width of folding head: 19 ± 1 mm Arc radius of folding surface: 0.25 ± 0.02 mm, 0.38 ± 0.02 mm, 3.5 ± 0.02 mm Clamping thickness of folding head: 0.25, 0.5, 0.75, 1.0, 1.25mm Applicable Standards: TAPPI Method T 511 and ASTM D2176</p>	Mumbai (2) Hyderabad
19	Falling Dart Impact Tester	2	<p>Test Method Method A or Method B is optional Test Range Method A: 50 ~ 2000 g and Method B: 300 ~ 2000 g Accuracy 0.1g (0.1J) Specimen Clamp Pneumatic Clamp Pressure of Gas Supply 0.6 MPa (outside of supply scope) Port of Gas Supply $\Phi 8$ mm PU Tubing Specimen Size > 150 mm x 150 mm Power Supply 220VAC 50Hz / 120VAC 60Hz</p>	Mumbai (2)
20	Carbon Black Content Tester	2	<p>Material of construction: Compact tubular furnace to get temperature up to 800 °C Temperature Controller: Microprocessor based Digital PID controller with range up to 800 °C resolution of 0.1 °C & accuracy of ± 0.1 °C Heating Load: 2 kw heating element wound on a tubular "Quartz" tube. Accessories: Glassware & gas flow regulator meter, Quartz boat, Pulling rod, Rubber tube, Gas bottle stand. Paint: Powder Coated.</p>	Mumbai Hyderabad
21	Dead Weight Micrometer	1	<p>Thickness of paper, plastic film samples to be measured between two circular optically flat surfaces under the pressure of 1 kg/cm² (98 kPa) Programmable thickness micrometer - motorized, automatic; "Push Button" operation; Digital display (LVDT) Differential transformer as measuring transducer with high accuracy; Measurement Units: Microns, mm, cm, inch, mils Measuring Range: 0-15 mm Accuracy: $0-500 \pm 1$ micron, Conforming to Standards: TAPPI T411, ISO 534, ISO 3034, DIN 53105, BS 3983, BS 4817</p>	Hyderabad

22	Grammage Sample Cutter (Hydraulic/automatic)	1	Grammage Sample Cutter is used to quickly and precisely cut samples of standard area. It is the special sample taker of grammage measurement for paper and cardboards. Sample Area: 100cm ² Accuracy: ±0.35cm ² Sample Thickness: (0.1~1.0) mm Conforming to Standards ISO 3801, ASTM D3776 / 2646, BS 3424 / 2471	Hyderabad
23	Hot Plate	1	Temperature: Upto 250 °C Heating Plate: Stainless Steel Controller: PID Power Supply: 220 / 230 Volts, 50 Hz Display: Digital Should come with overhead stirrer and support stand	Hyderabad
24	Torque Tester (digital)	1	Temperature: Upto 250 °C Heating Plate: Stainless Steel Controller: PID Power Supply: 220 / 230 Volts, 50 Hz Display: Digital Should come with overhead stirrer and support stand Calibration: Dead weight, NIST certifiable NIST Resolution: 0.1 unit (optionally 0.01 or 1) Maximum overload: 150% Rotation: infinite Torque tests: tightening, removal (CR, CT, etc.) Torque units: dNm, Nm, kg-cm, kg-m, oz-in, lb-in	Hyderabad
25	Dennison Wax Pick-up Tester	2	Apparatus should be comprised of: 1. Heating device, such as: Bunsen burner, alcohol lamp, propane torch, or electric heat element. 2. Wooden block, about 90 × 40 × 10 mm having a 30 mm diameter hole with an edge about 3 mm from one end. 3. Work surface that is smooth, hard, and a poor conductor of heat, such as wood. Conforming to Standards IS 1060 (Part 3), TAPPI T 459	Mumbai Hyderabad

26	Hardness Tester (Shore - A and Shore D)	2	Fitted with Digital durometer for shore hardness testing Measuring Range: 0 to 100 HA (HD) Accuracy: +/-0.5 Div Least Count: 0.1 HA. Conforming to ASTM D 2240, ASTM D 1415, ASTM D	Hyderabad & Kolkata
27	Automatic Titrator	2	No need for sample preparation (automatic acid addition by pump, no color indicator needed) Automatic measurement by pressing one button Accurate and repeatable measurement (electrochemical measurement) Not operator dependent Good safety with minimal reagent contact No need to use color indicator Automatic acid addition before titration Complete traceability with easy export features (USB or PC software)	Mumbai Hyderabad
28	Hot Plate with Magnetic Stirrer	1	Large 12" x 12" (30.5 x 30.5 cm) top plate surfaces Heating Range = Up to 200°C Stainless-steel top Stainless-steel case Conforming to ASTM D 36 and EN 1427	Hyderabad
29	Carbon Dioxide Free Air Genetor	1	Moisture < 0.5 ppm Total Hydro Carbon < 0.2 ppm CO & CO2 < 0.2 ppm Purity TOC/XL Grade Micro Particulates < 0.01µ Capacity of ZAG 1 LPM at 5kg/cm2 Room Temperature 5°C – 25°C Size of ZAG without compressor (in mm) 600H x 400W x 700D	Hyderabad

30	Melt Flow Index (MFI) Tester	3	<p>Temperature Range: Ambient to 400°C Accuracy: ± 1°C Resolution: 0.01°C Least Count: 0.01 gms. Weights: 1.2 kg; 2.16 kg; 3.8 kg, 5 kg & 10 kg Temperature Controller: PID Warm Up Time: 10 mins (23°C to 190°C) Corrosion Resistant Barrel, Pistons, and Die Sample Cutting: Automatic Conforming to Standard ASTM D 1238 Calibration certificate from NABL accredited laboratory Three years warranty plus five years AMC after the warranty period</p>	Mumbai Hyderabad Kolkata
31	Ply Bond Strength Tester	1	<p>Capacity: 0 – 2100 J/m² Impact Angle: 90° Selectable units (J/m², ft.lb/in², and kg•cm) Magnetic hammer release Automatic calibration Conforming to Standard TAPPI T 569 Automatic specimen hold-down during test sequence Settable limits, statistics-average, standard deviation, high/low results Calibration certificate Three years warranty plus five years AMC after the warranty period</p>	Hyderabad
32	Die Punch for Sample Preparation (Tensile Strength, Folding Endurance etc.) /Automatic Sample Cutter as per ISO/ASTM	2	<p>To obtain specimen by punching, using hollow dies of different sizes and contours. Interchangeable socket punches with different profiles and size according to the customer needs. Should be made of steel with hand finished cutting edges and provided with ejector for easy removal of the specimen after punching. Conforming to IS 1060, IS 2508, ASTM D 638, ASTM D 882</p>	Mumbai Hyderabad
33	Pouch Burst Tester (Automatic and Digital Model)	1	<p>Digital model with load cell based system; Very Low Noise Level; Embedded Push Buttons on control panel; Peak hold facility for registration of maximum reading; Capacity - 300kgf; Least Count - 0.1kgf; Large LCD Display (38 X 103 mm); Accuracy (0.2% of full scale) - 0.6 kgf</p>	Kolkata

34	Air Permability Tester- Gurley Method (Gurley Porosity Tester) - Imported	1	<p>The Densometer test measures the time required for a given volume of air (25cc to 300cc) to flow through a standard area of material tested, under light uniform pressure. The air pressure is supplied by an inner cylinder of specific diameter and standardized weight, floating freely within an outer cylinder partly filled with oil to act as an air-seal. The sample material is held between clamping plates having a circular orifice area of 1.0 (standard), 0.25 or 0.1 square inch (optional). Densometer readings may be evaluated on both a direct or indirect basis dependent upon the material and test purpose. They are a direct test of materials which are intended to either resist or permit the passage of air. Indirectly, they are used to measure other physical properties which affect the flow of air through a porous sheet.</p>	Kolkata
35	Tear Tester - Digital Model	1	<ul style="list-style-type: none"> • Purpose: To measure the force required to propagate an existing slit a fixed distance to the edge of the test sample. • Should comply with Standards IS 1060; ISO 1974,6383-2, 9290; ASTM D295, D752, D1424, D1922, D5734 ASTM D1922; TAPPI T414, T496 • 7" full-color digital touch screen display • Standard Impact Head: • Radius: 0.5 inches (12.7 mm) • Diameter: 0.75 inches (19.0 mm) • O-Ring Clamp: • Inside Diameter: 89 mm • Sample Size: • 5 x 5 in (127 x 127 mm) square • 5.25 in (133.35 mm) diameter circle • Air Clamp Assembly: Min. 60 PSI • Pendulum: Universal with interchangeable weights (200, 400, 800, 1600, 3200 and 6400 gram) • Pneumatic clamps and pendulum release • Automatic calibration of pendulum • Units: Selectable [Percentage (%), Millinewtons (mN), Grams-force (gf), Pounds-force (lbf)] • Sample statistics: Average, High/low results, Standard deviation • Output: USB flash drive, USB ESC/POS printer, RS232 • Power: Single phase; 220/240 V; 50/60 Hz • Storage and editing of up to 200 readings • Report printout with optional printer 	Kolkata

36	Vacuum Leakage Tester	1	Automation Grade: Automatic Display Unit: Bar, Kpa Accuracy: 0.035 Pa	Mumbai
37	Air circulated oven	2	Temperature range up to +300 °C Capacity from 30 liters up to 1060 liters SingleDISPLAY and TwinDISPLAY Forced air circulation via chamber fan (adjustable speed in 10% increments)	Mumbai
38	Column Density Meter	2	Automatic density calculation Automatic calibration system LCD display Resolution 0.0001 g/ml Accuracy 0.0001 g/ml Backlight Variable speed pumped filling system Twin conical filling flasks Automatic magnetic stirrer Automatic sweep mechanism Stainless steel sweep baskets 7x optical microscope Digital temperature control to 0.1°C RS232 output Cooling coil 110v 60hz and 240v 50Hz Product user manual Traceable calibration certificate Conforms to ISO1183 & ASTM D1505	Mumbai & Kolkata

39	Texture Analyzer	1	<p>Tester load capacity : 5 kN Load method : High-precision constant-speed strain measurement using backlash-free ball screw drive Test Force Measurement High-Precision Type : ± 0.5 % of indicated value (within 1/500 to 1/1 of load cell rated capacity) Conforms to JIS B 7721 class 0.5, ISO 7500-1 class 0.5, EN 10002-2 grade 0.5, and ASTM E4. Standard-Precision Type ± 1 % of indicated value (within 1/500 to 1/1 of load cell rated capacity) Conforms to JIS B 7721 class 1, ISO 7500-1 class 1, EN 10002-2 grade 1, and ASTM E4.. Range : 1 range (rangeless) Test force calibration : Automatic calibration using calibration cable</p> <p>Crosshead Speed Range : 0.001 to 1000 mm/min Maximum Return Speed : 1500 mm/min Crosshead Speed Accuracy : Within ± 0.1% of test speed Dimensions and Weight : W400 \times D530 \times H1315 mm, Approx. 55 kg</p>	Mumbai
40	Haze, Clarity & Transparency meter	4	<p>Measurement Range: 10-2500 HU (Haze Units) Repeatability: 1 Hu (Haze Unit) Reproducibility: 7 HU (Haze Units) Measurement Range - \emptyset Light transmittance: 0 ~ 100%; \emptyset Haze: 0-30% (absolute measurement); \emptyset Haze: 30.1% ~ 99% (relative measurement) Resolution: 0.1 Accuracy - light transmittance: ≤ 1; Haze: ≤ 0.5%: ± 0.3% Repeatability - Light transmittance: 0.5%; Haze: ≤ 0.5%: 0.1% Conforming to Standards ASTM D 1003, ASTM D 1044</p>	Delhi Hyderabad Kolkata Ahmedabad
41	Multimeter (Ph, Temperature and Humidity)	1	Standard	Hyderabad
42	UTM-Spares	1	Load cell - 10kN; 50kN, Self Aligning Compression Platen; Compression Platens; Horizon Software; Blet Kit for H50KS and Bellows for H50KS	Chennai

Note: In case the quoted quipment/item is not available in the market as per specifications, the bidder may submit Higher Version/Latest Version.

ANNEXURE II

LIST OF IT EQUIPMENT

1. <u>SERVERS FOR IIP MUMBAI</u>						
Sr No	Server	Qty	Unit Price in Rs.	Total Price in Rs.	Details	Make
1	Intel Xeon Silver 4208 2.1G, 8C/16T, 9.6GT/s, 11M Cache, Turbo, HT (85W) DDR4-2400 Configured for : 2 X 480GB SSD SATA Read Intensive 6Gbps 512 2.5in Hot-plug AG Drive,3.5in HYB CARR, 1 DWPD, 876 TBW, 4 X 1.92TB 7.2K RPM Self-Encrypting NLSAS 12Gbps 512e 3.5in Hot-plug Hard Drive, FIPS140, 2 X 16GB RDIMM, 2666MT/s, Dual Rank, Dual-Port 1GbE On-Board LOM, RAID 1 + RAID 5, Windows Server 2019 Standard,16CORE and 5 Years On site Support with all other standard features	4			Four servers would be used for: 1) Backup Server where all the policies are configured 2) AD Sever 3) Tally Sever 4) Antivirus Server	Dell or HP rack Mountable Server
2	Intel Xeon Silver 4208 2.1G, 8C/16T, 9.6GT/s, 11M Cache, Turbo, HT (85W) DDR4-2400 Configured for : 2 X 480GB SSD SATA Read Intensive 6Gbps 512 2.5in Hot-plug AG Drive,3.5in HYB CARR, 1 DWPD, 876 TBW, 4 X 1.92TB 7.2K RPM Self-Encrypting NLSAS 12Gbps 512e 3.5in Hot-plug Hard Drive, FIPS140, 2 X 16GB RDIMM, 2666MT/s, Dual Rank, Dual-Port 1GbE On-Board LOM, RAID 1 + RAID 5 and 5 Years On site comprehensive support with all other standard features	1			Email Server (For Netcore Linux Email Application)	Dell or HP rack Mountable Server

3	Intel Xeon Gold 5215 2.5G, 10C/20T, 10.4GT/s, 13.75M Cache, Turbo, HT (85W) DDR4-2666 with 128GB RAM, 4TB X 4 Nos of 7.2K RPM SATA 6Gbps 512n 3.5in Hot-plug Hard Drive, Dual-Port 1GbE On-Board LOM, RAID 1 + RAID 5 and 5 Years On site comprehensive support with all other standard features	1			Laboratory Billing Application	LIMS Server
4	Storage Access Network with useable data of 20 TB or more with five years onsite support	1			This SAN would be used for backup, testing of any servers and Backup of all end points	HP, DELL, NetApp. Both the storage would be in HA Mode.
5	42 U Rack Server with 1000/	1				Make: WQ, APW

2.VIDEO CONFERENCE SYSTEM for Mumbai (HO), Delhi, Chennai, Kolkata, Hyderabad & Ahmedabad

Sr. No.	Part Code	Description	Qty	Unit Price in Rs.	Total Price in Rs.
Part A -					
1	CTS-SPKER-TRACK60	Cisco TelePresence Speaker Track 60 Kit	1		
1.1	CON-ECDN-CTSSPKER	ESS WITH 8X5XNBD Cisco TelePresence Speaker Track 60 Kit	1		
2	PWR-CORD-IND-A	Power cable India 1.8 m	1		
3	CAB-ETH-ST-SHORT-	Two Ethernet cables (0.35m & 0.2m) for SpeakerTrack 60	1		
4	CAB-PWR-ST-SHORT-	Two 12V power cables (0.45m & 0.2m) for SpeakerTrack 60	1		

5	CTS-CAM-P60+	Cisco TelePresence Precision 60 Camera - auto expand only	2		
6	CTS-ST-ARRAY60+	Speaker Track 60 Microphone Array	1		
7	CTS-ST-INT-PLATE-	Interface plate CAM-P60 to Speaker Track 60	2		
8	PWR-12VDC-84W-	Power supply 12VDC 84W	1		
9	CTS-ST-ARR60-WMK-	Wall Mount Kit for Speaker Track 60 Microphone Array	1		
10	CS-CODEC-PRO-K9	Cisco Webex Codec Pro - Stand Alone Codec Pro - GPL	1		
10.1	CON-ECDN-CSCOREC9	ESS WITH 8X5XNBD Codec Pro	1		
11	PWR-CORD-IND-B	Power Cord for India 2m 10A	2		
12	CS-CODEC-PRO+	Codec Pro for Auto Expand	1		
13	CS-CPRO-ANT+	Antennas for Codec Pro	1		
14	CS-MIC-TABLE-E	Cisco Table Microphone with Euroblock plug	3		
14.1	CON-ECDN-CSMICTPL	ESS WITH 8X5XNBD Cisco Table Microphone with Euroblock pl	3		
14.2	CAB-MIC-EXT-E	Extension cable for the table microphone with Euroblock	3		
15	CS-CPRO-RACKEARS	Rackears for Cisco Spark Codec Pro	1		
16	CAB-2HDMI-3M-GR	CAB 3m GREY HDMI 2.0	3		
17	CAB-ETH-5M-GR	CAB 5 m/ 15 ft GREY ETHERNET	2		
18	CAB-PRES-2HDMI-GR	Presentation cable 8m GREY HDMI 1.4b (W/ REPEATER)	2		
19	CS-TOUCH10	Cisco Touch 10 controller for endpoints	1		
19.1	CON-ECDN-CTLDV10	ESS WITH 8X5XNBD Cisco Touch 10 inch	1		
20	CAB-DV10-8M+	Network cable (ethernet) 8 meter	1		
21	CAB-2HDMI-1.5M-GR	CAB 1.5m GREY HDMI 2.0 - Second Monitor HDMI cable	1		
Part B -					
1	A-FLEX	Collaboration Flex Plan	1		
2	SVS-SPK-SUPT-BAS	Basic Support for Cisco Spark	1		
3	A-FLEX-NUCM-MC	NU Cloud Meetings - Meetings (1)	1		
4	A-SPK-VOIP	Included VoIP (1)	1		
5	A-FLEX-TOLL-DIALIN	Meetings Toll Dial-In Audio (1)	1		
6	A-FLEX-FILESTG-ENT	File Storage Entitlement	20		
7	A-FLEX-MSG-ENT	Messaging Entitlement	1		
8	A-FLEX-MC-ENT	Meetings Entitlement (1)	1		

9	A-FLEX-WX-STG	Included Webex Storage for Flex	10		
10	A-FLEX-EDGAUD-USER	A-FLEX Webex Edge Audio	1		
11	A-FLEX-ADD-DEVREG	Cloud Device Registration (1)	1		
12	A-FLEX-DEVREG-ENT	Cloud Device Registration Entitlement	1		
Part C -(Optional)					
1	Samsung QE82N	Samsung 82 inch Display	1		
2	Samsung QB65N	Samsung 65 inch Display	1		

3. PASSIVE WORK FOR LAN (MUMBAI)

Sr. No.	Part Code	Description	Delivery Lead-Time	Qty	Unit Price in Rs.	Total Price in Rs.
Part A -						
1	12U Rack	"Wall Mount 12U x 550 W x 450 D , Front Glass Door (tinted, Toughened) with Lock & Key, 2 pairs of 19"" Mounting Rails with U-Marking Welded Side Walls With Metal Engraved D-Link Logo Standard Accessories : 1U Cable Manager (1), Hardware Packet (1 Pkt) 6 Socket 5 Amp. Power Distribution Unit (1 No) Roof Mounted Fan Unit / 90 CFM /230V AC (1 No)"	5-6 Weeks	4		
2	42 U network Rack 800x800	42U Network Enclosure Frame-800X800-STEEL with accessories like fan, pdu, cable manager etc.	5-6 Weeks	1		
3	42 U Server Rack 800x1000	42U Network Enclosure Frame-800X1000-STEEL with accessories like fan, pdu, cable manager etc.	5-6 Weeks	1		
4	Patch Pannel loaded (for camera)	Patch Panel Cat 6 UTP Keystone Type- 24 Port-Fully Loaded	5-6 Weeks	1		
5	Patch Pannel loaded (for data)	Patch Panel Cat 6 UTP Keystone Type- 24 Port-Fully Loaded	5-6 Weeks	6		

6	Patch cord 2 mtr (Rack side) + Camera	CAT6 UTP 24AWG PATCH CORD:2M,Plug 30U Snagless	5-6 Weeks	120		
7	Patch cord 2 mtrs (End User side)	CAT6 UTP 24AWG PATCH CORD:2M,Plug 30U Snagless	5-6 Weeks	100		
8	6 core multimode fiber optic cable Armoured	O. F.Cable 06F Outdoor - Armoured Unitube MM (50/125um) OM2 - HDPE Sheath(MOQ 2Km)	5-6 Weeks	670		
9	Cat 6 Cable Box	CAT6 UTP 23AWG Solid:305M	5-6 Weeks	12		
10	LIU 12 Port Loaded (rack Server Room)	LIU 12 Port Rack Mount - Loaded (LC) MM	5-6 Weeks	5		
11	Fiber PatchCord	PATCH CORD SC-SC MM(50) OM2 DUPLEX LENGTH- 3m	5-6 Weeks	10		
12	casing capping 50 mm	Local	5-6 Weeks	20		
13	casing capping 32 mm	Local	5-6 Weeks	150		
14	Fiber Pigtail	PIGTAIL SC MM (50um) OM2 SIMPLEX LENGTH- 1m	5-6 Weeks	60		
15	Cable Tie 200 mm	Packets	5-6 Weeks	15		
16	Back Box	Back Box For Single, Dual (Cat 5e/Cat6/Cat6A,square)	5-6 Weeks	100		
17	single faceplate	Face Plate - Single (Keystone Jack,square)	5-6 Weeks	100		
18	IO Cat 6	Jack Cat 6 Keystone STP - White	5-6 Weeks	100		
19	Rj 45	Cat 5e UTP Modular Plugs Pack of 100	5-6 Weeks	1		
20	32 mm HDPE Pipe	Custom Mtrs	5-6 Weeks	300		
21	Extra Accessories Cabling (Raval Plug, 35x8 screw, GI Saddle Clamp)	Lumpsum	5-6 Weeks	1		

22	Server Room Shifting	One-time Activity	3-4 Weeks	1		
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4.CISCO SWITCHES FOR LAN (MUMBAI)

Sr. No.	Part Code	Description	Qty	Unit Price in Rs.	Total Price in Rs.
Part A - L3 Switch 48 Port Switch (At actuals)					
1	C9300-24T-A	Catalyst 9300 24-port data only, Network Advantage	2		
2	CON-SNT-C93002TA	SNTC-8X5XNBD Catalyst 9300 24-port data only, Network	2		
3	C9300-NW-A-24	C9300 Network Advantage, 24-port license	2		
4	S9300UK9-1612	Cisco Catalyst 9300 XE 16.12 UNIVERSAL	2		
5	PWR-C1-350WAC-P	350W AC 80+ platinum Config 1 Power Supply	2		
6	C9300-SPS-NONE	No Secondary Power Supply Selected	2		
7	CAB-TA-IN	India AC Type A Power Cable	2		
8	C9300-SSD-NONE	No SSD Card Selected	2		
9	C9300-STACK-NONE	No Stack Cable Selected	2		
10	C9300-SPWR-NONE	No Stack Power Cable Selected	2		
11	PWR-C1-BLANK	Config 1 Power Supply Blank	2		
12	C9300-DNA-A-24	C9300 DNA Advantage, 24-port Term Licenses	2		
13	C9300-DNA-A-24-3Y	C9300 DNA Advantage, 24-Port, 3 Year Term License	2		
14	PI-LFAS-T	Prime Infrastructure Lifecycle & Assurance Term - Smart Lic	2		
15	PI-LFAS-AP-T-3Y	PI Dev Lic for Lifecycle & Assurance Term 3Y	2		
16	C9300-NM-8X	Catalyst 9300 8 x 10GE Network Module	2		
17	NETWORK-PNP-LIC	Network Plug-n-Play Connect for zero-touch device deployment	2		
Part B - L2 24 Port Switch (At actuals)					

1	C1000-24T-4G-L	Catalyst 1000 24port GE, 4x1G SFP	1		
2	CON-SNT-C1024TGL	SNTC-8X5XNBD Catalyst 1000 24port GE, 4x1G SFP, LANBa	1		
3	CAB-IND-10A	10A Power cable for India	1		
Part C - L2 48 Port Switch (At actuals)					
1	C1000-48T-4G-L	Catalyst 1000 48port GE, 4x1G SFP	1		
2	CON-SNT-C10T48GL	SNTC-8X5XNBD Catalyst 1000 48port GE, 4x1G SFP, LANBa	1		
3	CAB-IND-10A	10A Power cable for India	1		
Part D - 8 port POE Switch (At actuals)					
1	C1000-8FP-2G-L	Catalyst 1000 8port GE, Full POE, 2x1G SFP	1		
2	CON-SNT-C1008FPG	SNTC-8X5XNBD Catalyst 1000 8port GE, Full POE, 2x1G S	1		
3	CAB-IND-10A	10A Power cable for India	1		

Terms & Conditions

The selected bidder will conduct Site Survey for all the above-mentioned Items/BOQ/Requirement for understanding the actual ONSITE requirements of the Institute to propose the expenditure before issue of final order by IIP.

Five years comprehensive warranty and onsite support required for all the products.

Implementation, Configuration, Testing & Training to be provided to IIP users by the successful bidder.

Quantity of items to be purchased may vary depending on the post site survey conducted by the selected vendor.

ANNEXURE-III

Indian Institute of Packaging				
List of Library Books				
S. NO	TITLE	AUTHOR	PUBLISHER	COPIES
1	PLASTICS PACKAGING	SUSAN E.M. SALKE	HANSER PUBLICATIONS	3
2	FUNDAMENTALS OF PACKAGING TECHNOLOGY	WALTER SOROKA	INSTITUTE OF PACKAGING P	3
3	HANDBOOK OF PRINT MEDIA	HELMUT KIPPAN	SPRINGER SCIENCE AND BU	4
4	THE BIG BOOK OF PACKAGING	SANDEEP KUMAR GOYAL	PACKAGING CONNECTION	3
5	STRUCTURAL DESIGNS IN PACKAGING	PAUL JACKSON	PEPIN PRESS	2
6	PACKGING DESIGN: SUCCESFUL PRODUCT BRANDING FROM CONCEPT TO DESIGN	MARIANNE ROSNER	WILEY PUBLISHERS	2
7	ECO PACKAGING NOW	PENG CHONG	IMAGES PUBLISHING 2016	2
8	MEMS PACKAGING	V.C. LEE	SPRINGER PUBLICATIONS	3
9	MATERIAL INNOVATION PACKAGING DESIGN	ANDERW H. DENT	THAMES AND HUDSON	2
10	PACKAGING YOUR CRAFTS: CREATIVE IDEAS FOR CRAFTERS	VIOLA E. SUTANTO	LARK CRAFTS	2
11	STERILE DRUG PRODUCTS	MICHAEL V.AKERS	CRC PRESS	2
12	THE FUTURE OF PAKAGING: FROM LINEAR TO CIRCULAR	TOM SZAKY	Berrett-Koehler Publishers	2
13	POLYMER SCIENCE	V.R. GOWARIKER	NEW AGE INTERNATIONAL	3
14	THE SCIENCE AND TECHNOLOGY OF FLEXIBLE PACKAGING	BARRY A.MORRIS	WILLIAM ANDREW	2
15	HANDBOOK OF PLASTIC PROCESS	CHARLES A.HARPEX	WILEY PUBLISHERS	1
16	CHEMISTRY OF PETROCHEMICAL PROCESS	SAMI MATAR	GULF PROFESSIONAL PUBLIS	1
17	PLASTICS MATERIAL	J.A. BRYDSON	Butterworth-Heinemann; 7	1
18	DESIGN SOFTWARE MANUAL			
19	ADVANCED MATERIAL FOR THERMAL MANAGEMENT OF ELECTRONIC PACKAGING	<u>Xingcun Colin Tong</u>	SPRINGER PUBLICATIONS	1
20	TRENDS IN PACKAGING OF FOOD BEVERAGE AND OTHER FAST MOVING CONSUMER GOODS	NEIL FARMER	WOODHEAD PUBLISHING	1
21	Energy and Packaging	Boustead I Hancock G F	John Willy	1
22	Food Packaging : testing Methods and applica	Rish S R	American Chemical	1

ANNEXURE-III

Indian Institute of Packaging				
List of Library Books				
S. NO	TITLE	AUTHOR	PUBLISHER	COPIES
23	Label writing and planning : a guide to good c	Holkham T	Blackie Academic	1
24	Speciality papers	Gould F R	Noyes Data	1
25	Degradable polymers : principles and applicati	Scoot G	Kluwer Academic	1
26	Handbook of Pulp and Paper technology	Britt k w	Reinhold pub	1
27	Organic coating in theory and practice	Blom A V	Elsevier pub	1
28	Standards and standardization : basis principles	Sullivan c D	Marcel Dekker	1
29	motion and time study : design and measureme	Barnes R M	John Willy	1
30	Holographic vision : A history of new science	Johnston S f	Oxford	1
31	Smart packaging technologies for fast moving	kerry k Butler p	John Willy	1
32	Corrosion and corrosion protection handbook	Schweitzer P a	Marcel Dekker	1
33	PLASTICS ENGINEERING: 4ED		BUT-HEIN	1
34	TECHNIQUES FOR SHIP HANDLING AND BRIDGE TEAM MANAGEMENT (HB 2020)	Hiroaki Kobayashi	TAYLOR & FRANCIS EXCLUS	1
35	THE PRINCIPLES OF MULTIMEDIA JOURNALISM: PACKAGING DIGITAL NEWS	Richard Koci Hernandez, Jeremy Rue	T&F	1
36	PLASTIC EMOTIONS	Shiromi pinto	ENGLISH	1
37	PHARMACEUTICAL PACKAGING TECHNOLOGY (HB 2010) (SPECIAL INDIAN EDITION)		TAYLOR & FRANCIS EXCL. S	1
38	QUALITY CONTROL OF PACKAGING MATERIALS IN THE PHARMACEUTICAL INDUSTRY		TAYLOR & FRANCIS	1
39	SELECTING THERMOPLASTICS FOR ENGINEERING APPLICATIONS	charles P macdermott	T&F	1
40	PLASTIC FILM TECHNOLOGY HIGH BARRIER PLASTIC FILMS FOR PACKAGING , VOL -1	Kier M finlayson	DB MISC	1
41	PLASTIC FILM TECHNOLOGY HIGH BARRIER PLASTIC FILMS FOR PACKAGING , VOL -1	kier M finlayson	DB MISC	1
42	MODELLING FIXED INCOME SECURITIES AND INTEREST RATE OPTIONS	Robert A jarow	T&F	1
43	WORLD CLASS WAREHOUSING AND MATERIAL HANDLING 2ND EDITION	Edward frazelle	MC GRAW HILL	1

ANNEXURE-III

Indian Institute of Packaging				
List of Library Books				
S. NO	TITLE	AUTHOR	PUBLISHER	COPIES
44	FOOD PACKAGING MATERIALS TESTING AND QUALITY ASSURANCE (HB 2017)	preeti singh	TAYLOR & FRANCIS EXCLUS	1
45	EDIBLE FOOD PACKAGING: MATERIALS AND PROCESSING TECHNOLOGIES		T&F/CRC PRESS	1
46	PHARMACEUTICAL PACKAGING HANDBOOK	Edward bauer	TAYLOR & FRANCIS	1
47	KNOWLES NEOPLASTIC HEMATOPATHOLOGY 3/E	Attilio orazi	LWW	1
48	50 STUDIES EVERY PLASTIC SURGEON SHOULD KNOW 1ST EDITION	C hultman	THIEME	1
49	HOW TO SET UP & RUN A FASHION LABEL : THIRD EDITI	Toby meadows	ROLI-BOOKS	1
50	RUBBER & PLASTIC WASTE: RECYCLING, REUSE AND FUTURE DEMAND (PB 2014)	Chandra	CBS	1
51	MATERIALS HANDLING PRINCIPLES AND PRACTICE (PB)	sr Theodore H allegri	CBS	1
52	HANDBOOK OF PLASTIC TECHNOLOGY, VOL. 1		CBS HB	1
53	HANDBOOK OF PLASTIC TECHNOLOGY, VOL. 2		CBS HB	1
54	TEXTBOOK OF PHARMACEUTICAL PACKAGING TECHNOLOGY (PB 2017)	kaushika	CBS	1
55	FIXED INCOME SECURITIES: VALUATION RISK AND RISK MANAGEMENT	Pietro veronesi	WILEY INDIA	1
56	HANDBOOK OF PLASTIC PROCESSES (PB 2014)		WILEY INDIA EXCLUSIVE (CB	1
57	HANDBOOK OF PLASTIC MATERIALS AND TECHNOLOGY, 2 VOLUMES SET	Rubin irvin	WILEY INDIA	1
58	INFORMATION ANALYSIS, CONSOLIDATION AND REPACKAGING	sewa singh	ATLANTIC	1
59	50 MINUTE: HANDLING THE DIFFICULT EMPLOYEE		VIVA BOOKS PRIVATE LIMITE	1

ANNEXURE-III

Indian Institute of Packaging				
List of Library Books				
S. NO	TITLE	AUTHOR	PUBLISHER	COPIES
60	METALLIZED PLASTICS 7 : FUNDAMENTAL AND APPLIED ASPECTS		TAYLOR & FRANCIS	1
61	Hand book of Food Packaging	Paine, Frank A., Paine, Heather Y.	Springer	1
62	Polymers for Food Applications	Dr. Tomy J. Gutiérrez	Springer	1
63	Based Materils for food packaging	Ahmed, Shakeel	Springer	1
64	Functional Biopolymers	Thakur, V. K. (Ed), Thakur, M. K	Springer	1
65	Solid Waste Management and Recycling	Baud, I. (Ed), Post, J. (Ed), Furedy, C	Springer	1
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