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The quotations are invited for the following packages under shopping mode of procurement in TEQIP II.

Last date of submission: 25/12/2016 Time 17.00

Date of opening: 26/12/2016

List of Equipment/Software under SHOPPING under TEQIP II

Sr. No.	Description of the Package/Item	Qty
1	<p>Microhardness Tester with Buy back of old Shimadzu Tester Fully computer controlled Micro Vickers Hardness Tester with option of adding Knoop indenter. Test Force Range: Instrument should be capable of automatic test force ranges from 10gm to 2kg and arbitrary force ion within this range should be possible. The machine should have option of low force range from 1gm to 10gms. The force should be through electronic EMF technology and not through conventional deadweight technology with accuracy of less than 1.5%. Standard indenter: Vickers indenter with option of adding Knoop indenter Objective lens: 40X with option of adding one more lens. Operation: Instrument should be fully computer controlled including indentation measurement. The turret can be manually controlled. The software should measure the diagonal length of the indentation automatically from the picture captured with the CCD camera with the high precision of atleast 0.095 um of resolution. All of observation on the sample surface and the measurement result are to be displayed on PC screen. The software must include features, such as statistical calculations, data editing, conversion, graph display and an acceptable/not acceptable decision function. Force duration: 0 to 999 seconds with step of 1 second. Statistical items: Average, standard deviation, coefficient of variation, maximum value, minimum value, conversion value(HK,HBW,HS,MPa,HRA,HRB.HRC,HRD,HR15N,HR30N,HR45N) Pass/Fail judgments : Upper and lower limit settings for pass/fail judgments, up to 4-digit integers Surface shape correction: Configurable for cylindrical surface and spherical surface correction Graphical display: Variance graph, hardness layer depth graph The instrument should include Standard block and suitable PC and Printer.</p>	01
02	<p>Firewall for Networking</p> <hr/> <p align="center">General Requirements:</p> <hr/>	01 set

The Firewall must be appliance based and should facilitate multi-application environment which should support current network traffic as well as future growth		
The platform should be based on security-hardened, purpose built operating system architecture that is optimized for packet and application level content processing		
Should provide a Http, Https, SSH, Telnet, SNMP based management console for managing and configuring various components of the appliance		
The proposed system should be able to facilitate administration audit by logging detailed activities to event log for management, configuration changes, updates which also enable Admin to boot firmware on the earlier revision / configuration in case of any errors		
The Firewall system should have provision of Web Content Filter, Application Control, Antivirus systems and Intrusion Prevention in the same solution		
Be proprietary to prevent inheriting common OS vulnerabilities and should Resided on flash disk/Hard disk		
Networking & System Performance Requirements:		
The Firewall should support a minimum of 16 x GE RJ45, Pre-loaded 16x GE SFP Slots, Pre-Loaded 2x10G SFP+ Slots ,2xGE Management & 1 Console interfaces with auto sensing capacity		
The platform should support the standards based Link aggregation technology (IEEE 802.3ad) to achieve higher bandwidth		
Should support automatic ISP failover as well as ISP load sharing		
The Firewall should support Static, Policy Base, Identity based, Multicast routing and Dynamic routing for RIP1 & 2, OSPF, OSPFv3, BGP4, ISIS, RIPv6		
The Firewall should support Static, Policy Based, and Multicast routing		
The Firewall should support throughput of 52 Gbps or better for both small & large packets		
Should have atleast NGFW throughput of 5 Gbps		
Should support atleast 11 Millions concurrent sessions		
Should support atleast 2,80,000 New Sessions/sec		
Firewall Requirements:		
The Firewall should support deployment modes as; "Route Mode" or "Transparent Mode".		
The firewall shall be able to handle VoIP traffic securely with "pinhole opening" and support SIP, SCCP, MGCP and H.323 ALGs		
The Firewall should support Stateful inspection with optional Policy based NAT (Static OR Dynamic)		
Should support IPv6 ACL to implement security Policy for IPv6 traffic		
All internet based applications should be supported for filtering like Telnet, FTP,SMTP, HTTP, DNS, ICMP, DHCP, RPC,SNMP, BGP, IMAP, NFS etc		
The Firewall should support deployment of Virtualization at least for 10 virtual context from the day one without any additional cost / licenses & must be upgradable upto 250 by addition license		
IPSEC VPN & SSL VPN Requirements:		

The IPSEC VPN and SSL VPN capability shall attain Internet Computer Security Association (ICSA) Certification		
The proposed system shall support industry standards, L2TP, PPTP, IPSEC, and SSL VPN without additional cost for license or solution for VPN client		
IPSec VPN throughput must be 25 Gbps		
SSL VPN throughput must be 3.6 Gbps		
Firewall must have atleast 10,000 SSL VPN clients.		
IPSEC (DES, 3DES, AES) encryption/decryption and SSL encryption/decryption		
The system shall support IPSEC site-to-site VPN and remote user VPN in transparent mode without any additional cost for VPN clients		
Application control		
Atleast 3000+ application signature must be there & it should able to understand welknown application like P2P, Voice, etc without any dependency on the ports		
Solution must provide option to create custom signature for applications		
Solution should have application throughput of atleast 8 Gbps		
Threat Protection		
Antivirus module should be ICSA certified		
Firewall must able to scan http, https, IMAP, IMAPs, FTP, FTPs, POP, POPs, SMTP, SMTPs & MAPI protocols with AV signatures		
Threat prevention throughput must be atleast 3 Gbps after enabling AV, Appcontrol & IPS signatures		
User Authentication		
The proposed solution shall be able to support various form of user Authentication methods simultaneously , including:		
Local Database entries		
LDAP server entries		
RADIUS server entries		
TACACS+ server entries		
The solution shall be capable of providing Windows AD single sign-on by means of collector agents which broker between users when they log on to the AD domain and the device.		
System should also have capability to identify devices (ex. Android, iPhone, Windows etc.) & should be able to write policies on basis of device identity		
High Availability Requirements:		
The HA solution should support stateful session maintenance in the event of a fail-over to a standby unit/s.		
The HA solution should support both Active/Active and Active/Passive load balancing		
The High Availability should be supported in the Firewall from the day one and without any extra license		
Network Intrusion Detection & Prevention System Requirements:		
The IPS capability shall minimally attain Internet Computer Security Association (ICSA)		
Should have a built-in Signature and Anomaly based IPS engine on the same unit and Anomaly based detection should be based on thresholds		

Should support and IPS throughput of 8 Gbps with recommendation profile & atleast 4.2 Gbps with production env. profiles or better with enterprise mix		
Able to prevent denial of service and Distributed Denial of Service attacks on signature		
Administrator shall be able to configure DoS policies that are used to associate DoS settings with traffic that reaches an interface based on defined services, source and destinations IP/Range		
Configurable IPS filters to selectively implement signatures based on severity, target (client/server), protocol, OS and Application types		
Supports at least 7000+ attack signature and should be automatic updates directly over the internet for the newly discovered attacks		
Security check updates do not require reboot of the unit		
Supports user-defined signatures with Regular Expressions		
Web & Application Content Filtering System Requirements:		
The proposed system should have integrated Web Content Filtering solution without external solution, devices or hardware modules with proxy functionality.		
Web filtering inspection mode should support: Proxy-based, flow-based, and DNS		
URL database should have at least 200 million+ sites and 75 + categories.		
The proposed solution should be able to enable or disable Web Filtering per policy or based on authenticated user groups for both HTTP and HTTPS traffic.		
Shall include Web URL block, Web keyword block, Web Exempt List		
The proposed solution should be able to replace the web page when the web page matches the Web Filtering blocking criteria.		
Appliance must have proxy and caching functionalities		
Proxy feature must support PAC file configuration		
The solution shall be capable of rating URLs by domain and IP address which sends both the URL and the IP address of the requested site for checking, providing additional security against attempts to bypass the rating system.		
Data Leak Prevention Requirements:		
Should have the ability to prevent data loss through SMTP, FTP, HTTP, HTTPS & IM and using any application		
Full archive features for http, https, ftp, ftps & email protocols		
Should have built in pattern database and option to configure new patterns as and when required		
Anti-BOT, Mobile Security & ATP		
Solution must have facility to integrate with cloud based ATP solution for future use		
ATP solution must be from same OEM		
It also must have facility to block Bot attacks & also must scan Mobile devices security from day 1		
Two Factor Authentication		
Solution must provide option to integrate with Email/SMS/token based 2FA for Internal as well as VPN users authentication		
Zero day prevention or Sandboxing		

	Proposed solution must integrate with Cloud based sandboxing solution for zero day protection		
	Proposed Sandbox solution must have different VM for scanning of file to check for Zero day.		
	Certification		
	Firewall must be recommended by NSS DC-IPS report of 2016		
	The Firewall should be ICSA Labs certified for ICSA 4.0 and EAL 4 + certified.		
	The Firewall should belong to a family of products that attains NSS Approved Certification and attains IPv6 Ready Phase 2 & IPv6 Certification		
	Proposed solution must be in a challenger/Leader quadrant of Gartner Enterprise Firewall for atleast last 3 consecutive years		
	Services and Warranty		
	UTM Bundle and device for 3 years (24x7 FortiCare plus NGFW, Anti-Virus, Web Filtering and Antispam Services) Appliance, Advanced Hardware Replacement (Next Business Day)		
	Application control and filtering Technical Specifications Brand -FortiGate, Soniwall, Cyberoam, Cisco or Equivalent Hardware Accelerated 10GE SFP +SLOT 2 Hardware Accelerated 1GE SFP +SLOT 8 Hardware Accelerated 1GE RJ45 port 8 Console Port 1 USB Port 2 Memory Ram 4 GB or above Onboard Storage 120GB or above IPv4 Firewall Throughput (1518 / 512 / 64 byte, UDP) -36 / 36 / 24Gbps IPv6 Firewall Throughput (1518 / 512 / 86 byte, UDP)-36 / 36 / 24Gbps Firewall Throughput (Packet per Second)-36Mpps Concurrent Sessions (TCP) -5.5 Million New Sessions/Second (TCP)-270,000 Firewall Policies-10,000 IPsec VPN Throughput (512 byte)-20Gbps Gateway-to-Gateway IPsec VPN Tunnels-2,000 Client-to-Gateway IPsec VPN Tunnels-10,000 SSL-VPN Throughput-2.2Gbps SSL Inspection Throughput -3.5Gbps Application Control Throughput -6Gbps Threat Protection Throughput -2.4Gbps Virtual Domains (Default / Maximum)-10 / 10		
03	Filing Cabinet Systems 4 Drawer Vertical Filing Cabinet 470*620*1370 mm LBH Smooth drawer movement with precision telescopic slider mechanism An anti-rebound mechanism to prevent the drawer from coming out after it is pushed in		04

	An anti-tipping mechanism that allows only one drawer to be opened at a time to prevent toppling over of the cabinet with set of hanging type file folders for each drawer	
04	1. Mini Smart Classrooms Multimedia Podium / i-Touch Lectern	02
	26" X 28" X 46"	
	Steel Body Complete with 23" Interactive Touch Monitor, Visual Presenter, Amplifier & Gooseneck Microphone Mounted on the top, 1 Wireless Handheld Microphone, 1 Collar Microphone, 1 Head Microphone, Speaker With Twitter, Electric Fittings & Air Circulating Fan MCB for overload and shock protection	
	<ul style="list-style-type: none"> • Side Drawer (Made of Steel with lock) for Visual Presenter • Keyboard Drawer With Lock • Multipurpose Storage (Made of Steel with lock) for CPU & UPS • Slider (Made of Steel with lock) to cover 23" interactive touch screen and PA System Controls and Gooseneck Microphone. <i>(It can also be used as Book Rest/ Laptop Rest)</i> • Compatible with P4 CPU System • Laptop interface 	
	4 USB, VGA In, VGA Out, Laptop Interface, Ports for Additional Speakers	
	4 Wheels with locking facility	
	IPS Interactive Touch Monitor 23"	02
	Infrared, 6 Point Touch, 23" Diagonal, Touch Sensitivity Object as Finger/Dummy Pen/Any Opaque Object, HD LED IPS Screen, PA System 120 Watts Amplifier 40 Watt One Speaker One Gooseneck Mic Length 23" One Wireless Mic VHF One Collar Mic VHF One Head Mic LG IPS panel with 3 years manufacturing warranty	
	23" Diagonal	
	Finger/Dummy Pen/Any Opaque Object	
	HD LED IPS Screen guard on touch screen	
	Central locking system with RFID authentication Front two wheels with lock	
	PA System - 02	
	Amplifier- 120 Watts	
	Two Speaker- 20 Watt	
	One Gooseneck Mic- Length 23"	
	One Wireless Mic	

	One Collar Mic	
	One Head Mic	
	2. Visual Presenter	02
	Sensor 3.2 Mega Pixel	
	Zoom 22x Optical, 10X Digital	
	Focus Auto/Manual	
	Output Signal XGA, SXGA, 720p, WXGA, 1080P	
	Resolution (Horizontal) - ≥850TV Lines	
	Image Freeze	
	Positive/Negative Yes	
	Black & White/ Color Yes	
	Image Storage 32pcs	
	Input Video X1, Audio X3, Mic X1, RGB X2	
	Output Video X1, Audio X1, RGB X2, USB X1	
	Remote Control Yes	
	Lighting Arm Light X 2(LED) A4 Size Lightbox (LED)	
	3. Interactive Whiteboard	02
	Size- Diagonal 97"	
	Infrared	
	Touch Sensitivity - 6 Point Touch	
	Touch Object - Finger / Dummy Pen / Any Opaque Object	
	Ceramic surface	
	Wall Mount Bracket , Dummy Pens, USB Cable, Software	
	4. Short Throw Projector	02
	Projector Wall Mount Kit	
	VGA Cable	
	Power Cable	
05	<p>Chromatographic Reactor System of the Simulated Moving Bed Type</p> <p>The Chromatographic Reactor System of the Simulated Moving Bed Type (SMBR) should comprise of the following main units and the detailed specifications given thereof should be adhered strictly adhered to or the specifications offered should be higher than those specified:</p> <ol style="list-style-type: none"> 1. The Main SMBR unit comprising of the detailed specifications given in Table 1 or better than those specified. <p>In addition, the following is needed to be fulfilled:</p> <ol style="list-style-type: none"> 1. All necessary spare parts and tool kit. 2. Instruction manual / sheet. 3. Demonstration of the entire unit after successful installation and training. <p>SS Jacketed column – 4 Nos.</p>	
	Jacketed column with two inlet and two outlets, with provision for flow from top and bottom, Envelope packing	

Jacket for circulating hot fluid (temp upto 120 DegC)
Size: ID: 1 inch, Length: 13 inch,
High pressure pump (metering and piston type)- 3 Nos.
Flowrate: 0.01-10 ml/min
Pressure: Upto 150 bar
Self-flushing pump head
Back Pressure Regulator – 2 Nos.
Back Pressure Regulator (SS 316)
Controlled Pressure Range =0-250 PSIG (0 – 17.2 Bar), CV=0.08,
Diaphragm Sensed Back Pressure Regulator
MOC Body:SS316,Diaphragm =SS316,Seat =Vespel,
Operating Temp. = -40 Deg C to +200 Deg C,
Inlet and Outlet Ports =1/4”NPT(F)
Actuator – 2 Nos.
Parameter Gear Box: T, Function: Multi
4 MPOS Trapping Path, u-Electric/3” SO
1/8” 1.7mm, Spec. Specs., HC/E
Universal Electric Actuator,
Customized: 100 deg. C., 250 PSI gas
Teflon Tubing – 50Feet
Miscellaneous pressure fittings – 1set
Oil bath with circulating pump - 10 liter capacity, Temp: upto 120 DegC - 1
Metal frame to support the set up -1

5. Electrical Machines LAB Equipment

Particular	Specification	Qty.
Dc Shunt motor coupled to Shunt Generator	3 HP / 220 V / 1500 RPM / DC Shunt Motor coupled to 1.8 KW /220 V / 1500 RPM Shunt Generator with dynamometer type arrangement to measure intermediate power. with elevated base and coupling.	01
Dc Compound motor coupled to Compound Generator	3 HP / 220 V / 1500 RPM / DC Compound Motor coupled to 1.8 KW / 220 V /1500 RPM Compound Generator with dynamometer type arrangement to measure intermediate power with elevated base and coupling	01
DC shunt motor coupled to DC Series Generator	3 HP / 220 V / 1500 RPM / DC Shunt Motor coupled to 1.8 KW / 220 V / 1500 RPM DC Series Generator with elevated base and coupling.	01
DC Shunt Machines for Hopkins Test	2 KW / 220 V / 1500 RPM / DC Shunt Identical Machines coupled with each other with elevated base and coupling.	01
DC series machines for field test	2 KW / 220 V / 1500 RPM / DC Series Identical Machines coupled with each other with elevated base and coupling.	01
DC shunt Motor	3 HP / 220 V / 1500 RPM / DC Shunt Motor. With elevated base	01
DC Series motor	3 HP / 220 V / 1500 RPM / DC Series Motor with Mechanical Loading arrangement having Round dial scales and Friction Belt	01

with mechanical loading arrangement	for Torque Measurement. With elevated base	
DC separately excited motor	3.0 HP / 220 V / 220 V Separately excited / 1500 RPM DC Motor with flywheel mounted on Motor shaft. With elevated base	01
3 phase SQIM	3 HP / 415 V / 1440 RPM / TEFC / 50 Hz. / Three Phase Sq. Cage Induction Motor with Mechanical Loading arrangement having Round dial scales and Friction Belt for Torque Measurement. With elevated base	01
3 phase Slip ring IM	3 HP / 415 V / 1410 RPM / 50 Hz. / Star Connected / 200 V – Star connected wound Rotor / Three Phase Slipring Induction Motor with Mechanical Loading arrangement having Round dial scales and Friction Belt for Torque Measurement. With elevated base	01
1 Phase IM	'Benn' make 1 HP / 230 V / 1440 RPM / 50 Hz. / CSCR / SPDP / Single Phase / Sq. cage Induction Motor with Mechanical Loading arrangement having linear scales and Friction Belt for Torque Measurement. With all leads brought out for connection understanding and provision to observe operation of Centrifugal switch. With elevated base	01
Shunt motor coupled to Alternator	5 HP / 220 V / 1500 RPM / Shunt Wound DC Motor coupled to 3 KVA / 415 V / 3 Phase / 1500 RPM / 50 Hz. / Four Pole / Rotor Wound / Stator Excited / Separately excited / Manually Regulated Salient Pole Alternator with elevated base and couplings.	02
Synchronous motor	3 HP / 415 V / 1500 RPM / 50 Hz. / Star Connected / Rotor Wound / Stator Excited / Separately Excited / Manually Regulated / Salient Pole type / Auto Synchronous Motor with damper windings for auto induction start complete with Mechanical Loading arrangement having Round dial scales and Friction Belt for Torque Measurement. With elevated base	01
Single phase Transformer	2 KVA / 230 – 115 V / Air Cooled / Single Phase Transformer with sheet metal enclosure.	05
Three Phase Transformer	2 KVA / 415 V Star Primary – 415 V star secondary / Air Cooled / Three Phase Transformer with sheet metal enclosure. With 50 % tapping on both side. All 18 terminals brought out for various connections.	03
Control Panels for DC machines	Control Panel consisting DC MCB, 3 point Starter, 4 Nos. DC Ammeter, 2 Nos. DC Voltmeter, 1 No. Field Rheostats (External), Separate excitation unit for Generator, all other indicators & terminals required.	07
Control panels for AC Machines	Control Panel consisting TPN MCB 1no., DOL Starter, 500 V AC Voltmeter 1 nos., 300 V AC Voltmeter 1 no., 5 A AC Ammeter 1 No., 500 V / 5 A DIGITAL – 3 Ph. 2 E Wattmeter 1 no. with auz. External suply, all other indicators, terminals required.	03
Control Panel for Synchronous machines	Control Panel consisting following components. TPN MCB 1 no., DOL Starter interlocked with separate excitation unit for Motor 1 no., 10 A AC Ammeter 1 no., 2 A DC Ammeter 1 no., 500 V AC Voltmeter 1 no., 0.5 leg lead PF Meter 1 no., other required indicators	03
Synchronizing Panel	Synchronizing Panel for synchronizations of two Alternator set or Alternator with Mains. Consisting of voltmeter – 1 No., Frequency meter– 1 No., lamp Board bank for Lamp Method , Phase Sequence Meter – 1 No., Synchroscope – 1 No,	01

	necessary switches, fuses & indicators.	
Control Panel for Three phase Transformer	Control Panel consisting TPN MCB 1no., 500 V AC Voltmeter 4 nos., 5 A AC Ammeter 4 no., 100 V AC Voltmeter 1 no., 0.5 A AC Ammeter one no. , TPST Rotary switch , all other indicators, terminals required.	02
Three Phase Auto transformer	Three Phase / 6 A / Autotransformer (Variac) Input : 3 Phase / 415 V / 50 Hz. / AC Output : 3 Phase / 0 – 450 V / 6 A AC	02
DC Regulated Supply	DC Thyristor Controlled Regulated Power Supply Out Put : 230 V DC – 40 A with close loop feed back and Isolation Transformer. With regulation +/- 2.5 %. Input : 3 Phase / 415 V / 50 Hz. / AC Supply	01
AC/ Dc Distribution box	with 12 Nos. DC Feeders having 20 A DP MCB, 12 No. 3 Phase ac panel having 16 A TPN MCB, 1 No. AC Ammeter, 1 No. AC Voltmeter, Incomer switch and required indicator etc...	01
DC Shunt Motor	3 HP / 220 V / 1500 RPM / DC Shunt Motor coupled to 1.8 KW / 220 V / 1500 RPM Shunt Generator with dynamometer type arrangement to measure intermediate power. with elevated base and coupling.	01