



TENDER DOCUMENTS

Bio Lab Equipment

NUTECH/SCM/Bio Lab Phase-III-2019/TD-093

NATIONAL UNIVERSITY OF TECHNOLOGY

TENDER NOTICE

National University of Technology (NUTECH) NUTECH/SCM/Bio Lab Phase-III -2019/TD-093

Sealed bids are invited from Government / FBR Registered Firms for the procurement of Lab equipment for NUTECH Labs

Tender documents containing terms & conditions and detailed specifications of items can be downloaded from NUTECH website "<https://nutech.edu.pk/d-p.php>" w.e f **26 August 2019**.

1. Quotations shall be submitted as per requirement of the tender documents.
2. Bidders will be required to submit bank draft/PO equal to 5% of quoted value as Bid Bond in favor of National University of Technology (NUTECH).
3. Sealed bids with detailed specification should reach on the following address latest by **1130 hours on 12 Sep 2019**. Late submission will not be entertained.
4. Bids will be opened at **1200 hours on 12 Sep 2019** at SCM Office.
5. Project is to be completed in **90 days** from the date of award of contract.
6. Submit Rs 1500/- as Tender fee in favour of NUTECH HBL account: **NUTECH Tendering and contracts, 5037- 7000210755**. Please attach bank receipt with technical offer. Offers will not be entertained without payment of processing fee.

**Deputy Director (Supply Chain Management Office)
NATIONAL UNIVERSITY OF TECHNOLOGY (NUTECH) UPROAD,SECI-12,
ISLAMABAD
Tel: 0092-51-5476768, Ext: 178**



NATIONAL UNIVERSITY OF TECHNOLOGY

SUPPLY CHAIN MANAGEMENT OFFICE

INVITATION TO TENDER

Submission Date/Time 12 Sep 2019 at 1130 hours

1. NUTECH desires to procure the list of item(s)/Store(s) as per **Annexure-A**. Interested bidders are requested to send their bids through courier or deliver at NUTECH under two separate sealed envelopes (placed together in third envelope), marked clearly, "**Technical Offer**" and "**Commercial Offer**", respectively to the undersigned, latest by or before above mentioned due date. If due to any unforeseen circumstances, NUTECH establishment remains closed, then the last date of submission will be extended to next working day.
2. Please also note that Technical Offer should contain only Annexes-A & B duly filled in (supported with relevant technical literature /details/ catalogues etc) and receipt of tender processing fee. Commercial Offer will contain Annexure-C and bid bond (Dully mentioned and placed in separate envelope). Please ensure no space is left blank in the annexes.
3. Following must be noted for this IT (Invitation to Tender):-
 - a. 4 x copies of technical offer are to be provided.
 - b. Annexes A, B and C must be signed and stamped. Attach only relevant documents.
 - c. Please complete all document as per given format. Do not use your format or letter head. Offer may be rejected if given format is not followed.
 - d. Validity of offer will be 90 days.
 - e. Delivery period will be 90 days from the date of award of contract.
 - f. The firm should provide point to point acceptance of each clause of IT and special instructions attached with IT.
 - g. Firm will render a certificate with technical offer that firm is neither defaulter nor blacklisted by any Government / semi Government organization directly or indirectly.
 - h. Commercial Offer must be accompanied with a Bid Bond in agreement of faithful compliance of the conditions of Contract/Purchase Order. This amount will be equivalent to 5% of the total quoted value. In case of non-acceptance of any offer, the Bid Bond will be returned to the bidder by fastest possible means. The Bid Bond amount submitted by the

successful bidder will however be refunded on effective termination of Contract/ Purchase Order. (The Bid Bond will be forfeited in case of default by the bidder from his commitments made through his offer). Submission of Bid Bond is mandatory; otherwise your offer will be rejected.

- i. Rates should be quoted on Free Delivery basis at NUTECH Islamabad.
- j. 2 year warranty against 5% bank guarantee will be required from the successful bidders from the date of commissioning as performance bond against warranty/Guarantee
- k. Bid Bond may be used as performance guarantee till the delivery of stores, otherwise separate performance guarantee valued at 5 % of contract value will be submitted by successful firm till stores are delivered and inspected
- l. The stipulated delivery period should be strictly adhered to. Any anticipated delay that is beyond the control of Seller will be informed (in writing) well in advance of the expiry of the due date of the activity along with reasons thereof, requesting for the grant of extension in delivery period. If the Seller fails to do so, or the Buyer is not convinced with the rationale provided by the Seller, Liquidated Damages up to/at 2% per month or part thereof, will be imposed. However, the maximum limit of the Liquidated Damages will not exceed 10% of the contract value, in any way.
- m. If even after applicability of 10% LD, the Seller fails to deliver the required stores, the Buyer will be at liberty to procure the stores from an alternate source, on the Seller's "Risk & Cost". In that case, the Seller will be bound to make payment to the new source through NUTECH
- n. NUTECH reserves the right to cancel the Contract without assigning any reason whatsoever during its currency / execution / after placement, if the firm is found to be involved in any dubious activity, litigation, lacking to meet contractual obligations with the purchaser or is blacklisted with any other Public procurement agency. No claims / loss / damage of whatsoever nature shall be entertained and NUTECH's decision in this regard will be final and binding on the Supplier / Seller.
- o. Bidders must provide authorization certificate from OEM which will be verified
- p. Bidders to provide OEM/Principal Performa invoice with tech bid
- q. An appropriate amount may be paid for mobilization against Bank Guarantee/CDR/Demand Draft/Pay Order
- r. Partial payment/partial delivery allowed

4. We reserve the rights to accept or reject any or all tenders as a whole or in part without assigning any reason whatsoever. The decision in this regard will be firm, final and binding on all bidders.

DD (Supply Chain Management)



NATIONAL UNIVERSITY OF TECHNOLOGY

SUPPLY CHAIN MANAGEMENT OFFICE

TECHNICAL OFFER

Annex A

User Reference No **NUTECH/SCM/Bio Lab Phase-III -2019/TD-093**

Date: **08-08-2019**

Technical Specification

Ser	Items	Description	A/U	Country of Origin	Qty Req	Bidder Compliance			Tech Scrutiny to be done by user	
						Yes	No	Alternate	Accepted	Rejected
									Reason of Rejection	
1.	<u>96 WELL MICROPLATE AND CUVETTE READER</u>	<ul style="list-style-type: none"> • Wide wavelength range of 200 to 1000nm wavelength. • Light Source: Xenon Flash Lamp. • Wavelength Selection: monochromator. • Selection in 2 µL micro-volume samples, cuvettes and 96-well plates, Filter-Free UV- Vis Wavelength selection. • Fast reading of both 96- well plates and cuvette. • Shaking and incubation up to 50°C for temperature critical assays (optional). • Ease of use through the large touch screen. • Plus Cuvette and udrop plate • Superior usability and logical 	Nos.	European/ North American	1					

		<p>workflow with Software.</p> <ul style="list-style-type: none"> • USB port for easy data transfer. 							
2.	<u>THERMAL SHAKER</u>	<ul style="list-style-type: none"> • Large LCD screen to display multi functions. • Equipped with stainless-steel chamber and platform for easy cleaning. • Microprocessor PID controller with timing function. • Observation windows and self-check functions • Auto-controller of fan speed. • R134 refrigerant. • Highly Efficient filter for filtration of bacteria and dust. • Auto switch off when temperature is over. • Options available to connect printer and computer for data recording. • Shaking Speed: Range 40 to 300 rpm. • Temperature Range 0.1°C: Room temperature +5°C to 50°C. • Timing Range: 1~9999 minutes. • Amplitude: 20mm. <p>Power Consumption: 500W or less. Capacity: 50ml: 24 OR 100ml: 15 OR 250ml: 08, OR 500ml: 07, 1000ml - 02, or 2000ml 02.</p>	Nos.	European/ North American	1				

3.	<u>CONICAL REFRIGERATED MACHINE</u>	<ul style="list-style-type: none"> • Microprocessor controlled system. • Brushless DC motor 3 tier protective steel covering. • Digital display that indicates speed, time and RCF in operation. • Fluorine free compressor with double cycle cooling and heating effect. • Automatic electric lid lock system. • Provision to edit running parameters. • Max. speed: 16000 rpm • Max. RCF: 20600 x g • Max. Capacity: 10 x 5 ml • Speed Accuracy: ± 20 r/min • Temp. Range: -20°C-40°C. • Temp. Accuracy: ± 1°C • Timer range: 1-9 hr. 59 min. • Noise: ≤ 58 dB • Power supply: AC 220 V • Having Wide range of optional rotors <p>a) Angle Rotor: 12x15ml, Max Speed 10000RPM, Max RCF: 11840g</p> <p>b) Angle Rotor 24x1.5/2ml, Max Speed 15000RPM, RCF: 20600g</p> <p>c) Angle Rotor 6x50ml, Max Speed 11000RPM Max RCF: 13480g</p>	Nos.	European/ North American	1				
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4.	<p style="text-align: center;"><u>DNA AND PROTEIN ANALYZER WITH Thermal LAPTOP AND PRINTER</u></p>	<ul style="list-style-type: none"> • High resolution camera. • Analyses DNA and protein. • CCD camera: 5 megapixels, Pixel density 16-bit A/D: 10-bit. • Lens: F1.2 (motorized) transparent lens. • Trans-white illumination: LED White light transmission plate, • Motorized lens with spacious zoom range. • Automatic control system by the use of PC Stable plug and USB port for installation and operations. • Sample area: 23cm x32cm Ep white illumination: Dual epi-white LED, • UV Transmission Sample area:21cmx26cm, Wavelength:302nm Filter:590nm • Provided with Laptop (core i7, 7th Gen, 8 GB DDR3, 500 GB HDD or better). • Printer (thermal) specific for gel doc Print Size Max 3.9 x 3.0" images (1280 x 500), Time approximately 3.3 seconds, Resolution 1280 x 500 pixels and 256 grades for normal size printing. • Print Media: KP65HM, K61B and K91HG. <p>Power Supply AC220V</p>	Nos.	European/ North American	1					
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5.	<p><u>NANODROP WITH LAPTOP AND PRINTER (Printer specific for NANODROP)</u></p>	<ul style="list-style-type: none"> • 0.5 µl-2.0 µl micro-volume sample for direct measurement onto pedestal. • Wavelength range 200-800nm • User friendly software. • Long life Xenon flash lamp (10 flashes up to 10 years). • Permits use of highly concentrated samples. • Direct Concentration display without cell or cuvettes. • Wavelength range: 200-800nm. • Wavelength accuracy: ±1nm Wavelength Resolution: ≤ 3nm (FWHM at Hg 546 nm) Path length: 0.2mm (For high concentration measurement); 1.0mm (For ordinary). • Minimum Sample size: 0.5-2.0µl Absorbance range : 0.02 - 90A (10mm equivalent) • Absorbance precision: 0.003Abs Absorbance accuracy: 1% (7.332Abs at 260nm) • Light source: Xenon flash lamp • Measurement time: <8s • Sample Pedestal Material: Aluminum alloy and Quartz fiber • Detector Type: 3864- 	Nos.	European/ North American	1				
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		<p>element linear silicon CCD array.</p> <ul style="list-style-type: none"> • Software Compatibility: Windows XP, Windows 7 or higher. • Detects nucleic acid: up to 2-4500 ng/μL (dsDNA). • Provided with Laptop (core i5 7th Gen, 8 GB DDR3, 500GbHDD or better). • Printer specific for NanoDrop having specs, generation of 2,31x 4' cell adhesive labels. Print results for single samples and batches. 						
6.	<p><u>FLUORESCENCE MICROSCOPE WITH LAPTOP AND COLOUR PRINTER</u></p>	<ul style="list-style-type: none"> • LFM-B10 Viewing head : Siedentop type trinocular head inclined at 30°, 360° rotation Interpupillary adjustable distance 50-75 mm Antifungal system • Eyepiece : WF10X/20 mm • Objective : Infinite plan objectives (5pcs) 4x, 10x, 20x, 40x(s), 100x(s,oil) • Stage : Double layer mechanical stage with removable slide holder: 180x145 mm • Travel stage: 76(X)x52(Y) mm with right hand stage handle • Focusing : Coaxial coarse & fine adjustment knobs • Condenser : Abbe N.A. 1.25 	Nos.	Japan/European/ North American	1			

		<p>condenser with iris diaphragm</p> <ul style="list-style-type: none"> • Nosepiece : Quintuple quick stop, revolving mechanism with multiple ball bearing • Illumination : Build in Kohler illumination system with 3W LED, 6V/20W halogen lamp brightness adjustment, field diaphragm • Power supply : 85V~265V universal power supply Epi-fluorescence LED : (B,G) Excitation filter LED power source 3W LED lamphouse (B-LED lamp/ G-LED lamp) • Centering objective • Provided with laptop (corei5 7TH Gen, 8Gb DDR3 , 500Gb HDD or better) and • Colored printer with specs: • First page out (ready): Black As fast as 10.20 sec • First page out (ready): Color As fast as 11.80 sec • Resolution (black): Up to 600 x 600 dpi • Resolution (color): Up to 600 x 600 dpi • Resolution technology: Image RET 3600 • Print Technology: Laser • Display: Color graphic screen • Processor speed: 800 MHz 							
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		<ul style="list-style-type: none"> or higher • Number of print cartridges: 4 (1 each black, cyan, magenta, yellow) • Replacement cartridges: Yes • Dynamic security: Dynamic security enabled printer. • Automatic paper sensor: Yes • Paper trays, standard 2 • Paper trays, maximum 2 • Connectivity standard: Hi-Speed USB 2.0 port; built-in Fast Ethernet 10/100Base-TX network port; Dual band 802.11n 2.4/5GHz; Walkup host USB port • Security management: Embedded Web Server: password-protection, secure browsing via SSL/TLS; • Network: Enable/disable network ports and features • Minimum system requirements : OS Windows 7 or higher, 32-bit or 64-bit, 4 GB available hard disk space • Internet required; USB • Duplex printing: Yes 							
7.	<u>ULTRA-LOW FREEZER (-80°C)</u>	<ul style="list-style-type: none"> • Ultra-Low Temperature Freezer, Upright Type (Vertical), Slim, space saving, • Temperature range: -86°C to -46°C; Capacity:120L, Electronic Controller with temperature display 	Nos.	European/ North American/ Japan	1				

8.	<u>LABORATORY STERILIZER</u>	<ul style="list-style-type: none"> • Made up of stainless steel. • Dual scale numerical pressure gauge indicate temperature and pressure. • Provision to set sterilization time and temperature. • Silicon seal to prevent steam leakage. • Automatic shutdown with beep sound as sterilization completes. • Alarm to detect over heating followed by auto power cut. • Equipped with safety valve, electronic circuit safety system, and emergency exhaust switch. Capacity 50L, • Sterilization Temperature 134°C • Sterilization Pressure 0.22Mpa • Timer Range 0-80 min • Heat Average 0 \pm1 C • Power Supply AC220V 	Nos.	European/ North American	1				
9.	<u>DRY BATH (HEATING AND COOLING)</u>	<ul style="list-style-type: none"> • Temperature range: - Heating: room temp. - 100°C, Cooling: room temp. - Below room temp. 15°C, • Temperature setting range ; - 0.1-100°C • Temperature control accuracy ; - \pm 0.5°C • Temperature uniformity ; - Max. \pm 0.5°C • Max. heating rate ; - 	Nos.	European/ North American	1				

		5.5°C/min <ul style="list-style-type: none"> • Max. Cooling rate; - 5°C /min (100°C-room temp.) • 0.5°C/min (below room temp) • Mixing frequency ;- 200-1500rpm, Mixing frequency ;- 200-1500rpm, • Screen ;- TFT, • Adapter block material:- Aluminum, 							
10.	<u>LIGHT MICROSCOP E</u> (Binocular microscope)	<ul style="list-style-type: none"> • Secured eyepieces, Powerful LED illumination, 360° rotatable, • Objectives: E-plan achromatic DIN objectives 4x N.A.0.10, 10x N.A.0.25, S40x N.A.0.65, All optics should be anti-fungus treated and anti-reflection coated, <ul style="list-style-type: none"> • Height adjustable. 		European/ North American	2				

Instl/Assy/Commissioning Req	Yes✓	No	Contract with OEM/Supplier	Yes✓		No	
Performance Bond Req	Yes✓	No	Offer Req for Package Deal	Yes		No✓	
Note: (If any)			Warranty req and Duration	Yes✓	2yrs	No	
Maint Spare Req	Yes✓	No	Essentially Running spare req	Yes✓		No	
Pub/Lit Req	Yes✓	No	Req of Cert for test data results	Yes✓		No	
Trg Req	Local✓	Foreign	Req of Calibration	Yes✓		No	

Note: Tick Relevant Box

Special Instructions

Description	Bidder			Tech Scrutiny to be done by User		
	Yes	No	Alternate Offer	Accepted	Rejected	Reasons of Rejection
<p>Warranty period Two years from the date of commissioning. A warranty sticker is to be pasted on each imported item by the Supplier / OEM highlighting Name of Firm, Contract No and date, Description of Store and Warranty validity</p>						
<p>Training Notes Supplier will provide a set of handouts for training on operation and maintenance of the equipment</p>						
<p>Publications Supplier is to provide hard and soft copies (CD) of following manuals.</p> <p>(a) Operational / Maintenance manual: - Qty 01 with Equipment and additional Qty 02 for record purposes and should consist of following sections:-</p> <p style="padding-left: 20px;">(1)Equipment Description /Operation:-</p> <p style="padding-left: 40px;">(a)Specifications</p> <p style="padding-left: 40px;">(b)Description</p> <p style="padding-left: 40px;">(c)Operation</p> <p style="padding-left: 20px;">(2)Servicing:-</p> <p style="padding-left: 40px;">(a)Maintenance Schedule</p> <p style="padding-left: 40px;">(b)Adjustment / test</p> <p style="padding-left: 40px;">(c)Removal / Installation procedure</p> <p style="padding-left: 40px;">(d)Tools Used</p> <p style="padding-left: 20px;">(3) Trouble shooting guide</p> <p style="padding-left: 20px;">(4) Cleaning requirements</p> <p style="padding-left: 20px;">(5) Shipping and receiving</p> <p style="padding-left: 20px;">(6) Storage requirements</p> <p>(b) IPB (Illustrated Parts Breakdown Manual) should have full parts description along with detailed diagrams (exploded view).</p>						
<p>Spares / Technical Support</p> <p>(a) Supplier to have in-country spares / technical support and ensure spares and technical support / assistance for next 10 years</p> <p>(b) Comprehensive list of spares required for scheduled</p>						

<p>maintenance of Equipment is to be provided</p> <p>(c) Any software provided must have its license</p> <p>(d) Software upgrade support must be provided free of cost for 10 x years with renewed license at every upgrade</p> <p>(e) Supplier must also provide calibration service for at least 5 x years after commissioning</p>						
<p>Additional Spare / Replaceable parts.</p> <p>(a) Replaceable spare / parts during scheduled inspections are to be identified and provided as per requirement along with equipment sufficient to cater five years consumption.</p> <p>(b) All specialized / standard tools required for inspection / repair / servicing must be supplied along with equipment.</p>						
<p>Physical Inspection Criteria: 100% physical inspection of store will be carried out before commissioning of the equipment for following details:-</p> <p>(a) For physical damage, scratches and deformity.</p> <p>(b) Accessories /components as per contractual specifications.</p> <p>(c) Technical Manuals (Operation manual, user guide, IPBs).</p> <p>(d) Quality certificate and calibration certificate by the OEM</p> <p>(e) OEM certificate and verifiable documents by the supplier that store has been procured from certified source and is factory new and from latest production.</p> <p>(f) Brand name and country of origin.</p>						
<p>Commissioning</p> <p>(a) Commissioning of the equipment will be carried out by OEM rep at his own cost and risk at designated place at NUTECH.</p>						

<p>(b) Any special requirement for installation, operation and commissioning must be specified in the offer by the supplier.</p>						
<p>Improvement and Safety Measures Any improvement and safety measures suggested by NUTECH during commissioning are to be resolved by the supplier / manufacturer at no extra cost.</p>						
<p>Liability of Supplier (a) OEM certificate of authorized dealership Supplier is to provide original OEM certificate of subject equipment bought directly from the manufacturer and being an authorized dealer. (b) In case the equipment supplied is not compatible with specifications, the supplier will be obliged to call his representatives at his own cost for consultation and corrective action</p>						
<p>Special Notes (a) Additional requirements for the maintenance of equipment (if any) must be intimated by the supplier in technical offer. (b) Supplier must provide the list of organizations using same equipment in Pakistan (if any). (c) Equipment must be a standard product of OEM available at web address of OEM. (d) In case of premature failure of the equipment, OEM has to replace / rectify the item free of cost. Required transportation charges would be borne by the supplier.</p>						

Firm Name _____ Signature _____ Name _____ Designation _____



NATIONAL UNIVERSITY OF TECHNOLOGY
SUPPLY CHAIN MANAGEMENT OFFICE

TECHNICAL OFFER

Annex B

User Reference No **NUTECH/SCM/Bio Lab Phase-III-2019/TD-093**

Date: **08-08-2019**

Please fill in the following essential parameters:

1. Validity of Offer: _____ Days (Should not be less than 90 days)
2. Delivery Period: _____ Days (After Placement of order)
3. Country of Origin: _____

General

GST No: _____ (Please enclose copy)

NTN/CNIC: _____ (if exempted, please provide valid exemption certificate)

Payment Terms:

1. 50 % advance payment against BG/CDR/Pay Order/DD
2. 50% payment after delivery, installation /commissioning, user satisfaction certificate.

Details of Payment Recipient

(1) Name/Title: _____

(2) Address: _____

OEM Name: _____

Signature: _____

Focal Person Person: _____

Official Seal: _____

Phone Number: _____

Name : _____

Email Address: _____

Designation: _____



NATIONAL UNIVERSITY OF TECHNOLOGY

SUPPLY CHAIN MANAGEMENT OFFICE

FINANCIAL OFFER

Annex C

User Reference No **NUTECH/SCM/Bio Phase-III -2019/TD-093**

Date: **08-08-2019**

Ser	Items	Description	A/U	Qty Req	Unit Price (Rs) (Incl all taxes)	Total amount for total qty (Rs) (Incl all taxes)
1.	<u>96 WELL MICROPLATE AND CUVETTE READER</u>	<ul style="list-style-type: none"> • Wide wavelength range of 200 to 1000nm wavelength. • Light Source: Xenon Flash Lamp. • Wavelength Selection: monochromator. • Selection in 2 µL micro-volume samples, cuvettes and 96-well plates, Filter- Free UV- Vis Wavelength selection. • Fast reading of both 96- well plates and cuvette. • Shaking and incubation up to 50°C for temperature critical assays (optional). • Ease of use through the large touch screen. • Plus Cuvette and udrop plate • Superior usability and logical workflow with Software. • USB port for easy data transfer. 	Nos.	1		
2.	<u>THERMAL SHAKER</u>	<ul style="list-style-type: none"> • Large LCD screen to display multi functions. • Equipped with stainless-steel chamber and platform for easy cleaning. • Microprocessor PID controller with timing function. • Observation windows and self-check functions 	Nos.	1		

		<ul style="list-style-type: none"> • Auto-controller of fan speed. • R134 refrigerant. • Highly Efficient filter for filtration of bacteria and dust. • Auto switch off when temperature is over. • Options available to connect printer and computer for data recording. • Shaking Speed: Range 40 to 300 rpm. • Temperature Range 0.1°C: • Room temperature +5°C to 50°C. • Timing Range: 1~9999 minutes. • Amplitude: 20mm. <p>Power Consumption: 500W or less. Capacity: 50ml: 24 OR 100ml: 15 OR 250ml: 08, OR 500ml: 07, 1000ml - 02, or 2000ml 02.</p>				
3.	<u>CONICAL REFRIGERATED MACHINE</u>	<ul style="list-style-type: none"> • Microprocessor controlled system. • Brushless DC motor • 3 tier protective steel covering. • Digital display that indicates speed, time and RCF in operation. • Fluorine free compressor with double cycle cooling and heating effect. • Automatic electric lid lock system. • Provision to edit running parameters. • Max. speed: 16000 rpm • Max. RCF: 20600 x g • Max. Capacity: 10 x 5 ml • Speed Accuracy: ± 20 r/min • Temp. Range: -20°C-40°C. • Temp. Accuracy: ± 1°C • Timer range: 1-9 hr. 59 min. • Noise: ≤ 58 dB • Power supply: AC 220 V • Having Wide range of optional rotors 	Nos.	1		

		<p>d) Angle Rotor: 12x15ml, Max Speed 10000RPM, Max RCF: 11840g</p> <p>e) Angle Rotor 24x1.5/2ml, Max Speed 15000RPM, RCF: 20600g</p> <p>f) Angle Rotor 6x50ml, Max Speed 11000RPM Max RCF: 13480g</p>				
4.	<p><u>DNA AND PROTEIN ANALYZER WITH Thermal LAPTOP AND PRINTER</u></p>	<ul style="list-style-type: none"> • High resolution camera. • Analyses DNA and protein. • CCD camera: 5 megapixels, Pixel density 16-bit A/D: 10-bit. • Lens: F1.2 (motorized) transparent lens. • Trans-white illumination: LED White light transmission plate, • Motorized lens with spacious zoom range. • Automatic control system by the use of PC Stable plug and USB port for installation and operations. • Sample area: 23cm x32cm Ep white illumination: Dual epi-white LED, • UV Transmission Sample area:21cmx26cm, Wavelength:302nm Filter:590nm • Provided with Laptop (core i7, 7th Gen, 8 GB DDR3, 500 GB HDD or better). • Printer (thermal) specific for gel doc Print Size Max 3.9 x 3.0" images (1280 x 500), Time approximately 3.3 seconds, Resolution 1280 x 500 pixels and 256 grades for normal size printing. • Print Media: KP65HM, K61B and 	Nos.	1		

		K91HG.				
		Power Supply AC220V				
5.	<u>NANODROP WITH LAPTOP AND PRINTER (Printer specific for NANODROP)</u>	<ul style="list-style-type: none"> • 0.5 µl-2.0 µl micro-volume sample for direct measurement onto pedestal. • Wavelength range 200-800nm • User friendly software. • Long life Xenon flash lamp (10 flashes up to 10 years). • Permits use of highly concentrated samples. • Direct Concentration display without cell or cuvettes. • Wavelength range: 200-800nm. • Wavelength accuracy: ±1nm Wavelength Resolution: ≤ 3nm (FWHM at Hg 546 nm) Path length: 0.2mm (For high concentration measurement); 1.0mm (For ordinary). • Minimum Sample size: 0.5-2.0µl Absorbance range : 0.02 - 90A (10mm equivalent) • Absorbance precision: 0.003Abs Absorbance accuracy: 1% (7.332Abs at 260nm) • Light source: Xenon flash lamp • Measurement time: <8s • Sample Pedestal Material: Aluminum alloy and Quartz fiber Detector Type: 3864-element linear silicon CCD array. • Software Compatibility: Windows XP, Windows 7 or higher. • Detects nucleic acid: up to 2-4500 ng/µL (dsDNA). • Provided with Laptop (core i5 7th Gen, 8 	Nos.	1		

		<ul style="list-style-type: none"> GB DDR3, 500GbHDD or better). Printer specific for NanoDrop having specs, generation of 2,31x 4' cell adhesive labels. Print results for single samples and batches. 				
6.	<p><u>FLUORESCENCE MICROSCOPE WITH LAPTOP AND COLOUR PRINTER</u></p>	<ul style="list-style-type: none"> LFM-B10 Viewing head : Siedentop type trinocular head inclined at 30°, 360° rotation Interpupillary adjustable distance 50-75 mm Antifungal system Eyepiece : WF10X/20 mm Objective : Infinite plan objectives (5pcs) 4x, 10x, 20x, 40x(s), 100x(s,oil) Stage : Double layer mechanical stage with removable slide holder: 180x145 mm Travel stage: 76(X)x52(Y) mm with right hand stage handle Focusing : Coaxial coarse & fine adjustment knobs Condenser : Abbe N.A. 1.25 condenser with iris diaphragm Nosepiece : Quintuple quick stop, revolving mechanism with multiple ball bearing Illumination : Build in Kohler illumination system with 3W LED, 6V/20W halogen lamp brightness adjustment, field diaphragm Power supply : 85V~265V universal power supply Epi-fluorescence LED : (B,G) Excitation filter LED power source 	Nos.	1		

		<p>3W LED lamphouse (B-LED lamp/ G-LED lamp)</p> <ul style="list-style-type: none"> • Centering objective • Provided with laptop (corei5 7TH Gen, 8Gb DDR3 , 500Gb HDD or better) and • Colored printer with specs: • First page out (ready): Black As fast as 10.20 sec • First page out (ready): Color As fast as 11.80 sec • Resolution (black): Up to 600 x 600 dpi • Resolution (color): Up to 600 x 600 dpi • Resolution technology: Image RET 3600 • Print Technology: Laser • Display: Color graphic screen • Processor speed: 800 MHz or higher • Number of print cartridges: 4 (1 each black, cyan, magenta, yellow) • Replacement cartridges: Yes • Dynamic security: Dynamic security enabled printer. • Automatic paper sensor: Yes • Paper trays, standard 2 • Paper trays, maximum 2 • Connectivity standard: Hi-Speed USB 2.0 port; built-in Fast Ethernet 10/100Base-TX network port; Dual band 802.11n 2.4/5GHz; Walkup host USB port • Security management: Embedded Web Server: password-protection, secure browsing via SSL/TLS; • Network: Enable/disable network ports and features • Minimum system requirements : OS Windows 7 or higher, 32-bit or 64-bit, 4 GB available hard disk space 				
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		<ul style="list-style-type: none"> • Internet required; USB • Duplex printing: Yes 				
7.	<u>ULTRA-LOW FREEZER (-80°C)</u>	<ul style="list-style-type: none"> • Ultra-Low Temperature Freezer, Upright Type (Vertical), Slim, space saving, Temperature range: -86°C to -46°C; Capacity:120L, Electronic Controller with temperature display 	Nos.	1		
8.	<u>LABORATORY STERILIZER</u>	<ul style="list-style-type: none"> • Made up of stainless steel. • Dual scale numerical pressure gauge indicate temperature and pressure. • Provision to set sterilization time and temperature. • Silicon seal to prevent steam leakage. • Automatic shutdown with beep sound as sterilization completes. Alarm to detect over heating followed by auto power cut. • Equipped with safety valve, electronic circuit safety system, and emergency exhaust switch. Capacity 50L, • Sterilization Temperature 134°C • Sterilization Pressure 0.22Mpa • Timer Range 0-80 min • Heat Average 0 \pm1 C <p>Power Supply AC220V</p>	Nos.	1		
9.	<u>DRY BATH (HEATING AND COOLING)</u>	<ul style="list-style-type: none"> • Temperature range: - Heating: room temp. - 100°C, Cooling: room temp. - Below room temp. 15°C, • Temperature setting range ; - 0.1-100°C • Temperature control accuracy ; - \pm 0.5°C • Temperature uniformity ; - Max.\pm 0.5°C • Max. heating rate ; - 5.5°C/min • Max. Cooling rate; - 5°C /min (100°C- room temp.) • 0.5°C/min (below room temp) 	Nos.	1		

		<ul style="list-style-type: none"> Mixing frequency ; - 200-1500rpm, Mixing frequency ; - 200-1500rpm, Screen ; - TFT, Adapter block material:- Aluminum,				
10.	Light microscope (Binocular microscope)	<ul style="list-style-type: none"> Secured eyepieces, Powerful LED illumination, 360° rotatable, Objectives: E-plan achromatic DIN objectives 4x N.A.0.10, 10x N.A.0.25, S40x N.A.0.65, All optics should be anti-fungus treated and anti-reflection coated, Height adjustable. 		2		
Total						

Bid Bond Ref # _____ Total GST _____

Total Value (Incl Tax) _____

*Bid Bond to be attached with Annex C. Copy of Bid Bond be attached with technical offer without showing its value. Exposure of bid bond may result in rejection of offer.

Firm Name _____ Signature _____ Name _____ Designation _____
