



TERMS AND CONDITIONS

[All pages (BoQs & Terms & Conditions) are mandatory to be signed /stamped, Rates should be quoted on our prescribed format, failing which the bid may be rejected]

1. The contract will be executed and handed over in satisfactory conditions up to the entire satisfaction of COMSATS Institute of Information Technology, Lahore Campus.
2. Documents along with Pay Order / Demand Draft amounting Rs. 1,000/- as a tender documents fee (Non-Refundable) in favor of COMSATS Institute of Information Technology, Lahore to the address given below. No bid will be accepted without tender documents' fee
3. Part / Advance payments is not allowed.
4. The exact completion/delivery time from the date of the purchase / work order will be **120 days**. The handing over / completion time for this contract is of critical importance.
5. **The bid proposal should be inclusive of all freight and packaging charges and will be delivered at Lahore Airport.**
6. **The conversion rate of FCY will be applied on actual GD-1(Conversion Rate) for C&F Quoted Items/Equipments only as per BoQs.**
7. **Custom clearance will be cleared by COMSATS Lahore Campus for C&F Quoted Items/Equipments only.**
8. Any addition, deletion or modification of any clause of the procurement terms & conditions of CIIT by any vendor will not be acceptable and may lead to rejection of the bid.
9. COMSATS Institute of Information Technology, Lahore Campus, will follow the PPRA rule of single stage two envelope procedure;
 - i. The bid shall comprise a single package containing **two separate envelopes**. Each envelope shall contain separately the **financial proposal** and the **technical proposal**;

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- ii. The envelopes shall be marked as **“FINANCIAL PROPOSAL”** and **“TECHNICAL PROPOSAL”** in bold and legible letters to avoid confusion;
- iii. Initially, only the envelope marked **“TECHNICAL PROPOSAL”** shall be opened;
- iv. The envelope marked as **“FINANCIAL PROPOSAL”** shall be retained in the custody of the procuring agency without being opened;
- v. The procuring agency shall evaluate the technical proposal in a manner prescribed in advance, without reference to the price and reject any proposal which does not conform to the specified requirements;
- vi. During the technical evaluation no **amendments** in the technical proposal shall be permitted;
- vii. The financial proposals of bids shall be opened publicly at a time, date and venue announced and communicated to the bidders in advance;
- viii. After the evaluation and approval of the technical proposal the procuring agency, shall at a time within the bid validity period, publicly open the financial proposals of the technically accepted bids only. The financial proposal of bids found technically nonresponsive shall be returned un-opened to the respective bidders;
- ix. and
- x. The bid found to be the lowest evaluated bid shall be accepted.

10. Bidders who do not qualify cannot challenge the finding of the evaluation.

11. The bids should be submitted in a sealed envelope up to 29-10-2014 on or before 14:30 hrs and will be opened on the same date at 15:00 hrs in the presence of available bidders.

12. The envelope should be marked as under.

Manager Purchase

COMSATS Institute of Information Technology, Lahore Campus.
Defence Road, Off Raiwind Road, Lahore.
Tel: 042-111-001-007, Ext: 875

13. The envelope shall also bear the word “CONFIDENTIAL” and following identification quotation of “Lab Equipment for IRCBM Department”.

14. The bid form (Annex-I) must be duly filled in, stamped and signed by the authorized representative of the bidder.

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15. If the vendors fail to deliver the order in time then the vendor will be charged penalty as under:-
- 1% per day of the invoice price for 5 working days.
 - 2% per day of the invoice price for further 5 working days.
 - If the vendor fail to deliver the items during the extended then the supply order may be cancelled, earnest money and payment may be forfeited.

16. The prices of C&F Quoted Items should be inclusive of all Freight Charges and Other items should be quoted in FOR (inclusive of all taxes) as per BoQs.

17. All prices should be valid for at least 120 days. Withdrawal or any modification of the original offer within the validity period shall entitle CIIT to forfeit the earnest money in favor of the CIIT and / or put a ban on such vendor participation in CIIT tenders / works.

18. It is the sole responsibility of the agent / supplier / manufacturer to comply with the applicable laws, be national or international.

19. In case of any dispute, decision of the Director CIIT-Lahore, will be final and binding upon the parties.

20. The CIIT-Lahore reserves the right to modify equipment specifications/quantities at any time before the award of work.

21. The bidder is required to furnish in form of Bank deposit /C.D.R / Pay order equivalent to 2% of the total Bid price as Earnest Money crossed in favor of “COMSATS Institute of Information Technology, Lahore Campus”. Any bid not accompanied by Earnest Money shall be rejected without any right of appeal.

- 22. Warranty will be on the part of supplier, as per following after the completion of supply /work:**

- **One Year Warranty for all C&F Quoted Items except the Bio-Logical Safety cabinet.**
- **Three Year Warranty for Bio-Logical Safety Cabinet.**

23. 05% of the total value of the Invoice will be retained **as per above mentioned warranty period** as security by COMSATS Institute of Information Technology, Lahore Campus, and will be released after the completion of warranty period, which will start from the date of completion of work

24. COMSATS Institute of Information Technology, Lahore Campus, reserves the rights to accept or reject any or all bids without assigning any reason whatsoever.

No offer of a supplier/firm will be considered if: -

- Received without earnest money
- Received later than the date and time fixed for tender submission
- The tender is unsigned/ unstamped
- The offer is ambiguous
- The offer is conditional
- The offer is from a firm, which is black listed, by any Govt. Office.
- The offer is received by telephone/telex/fax.

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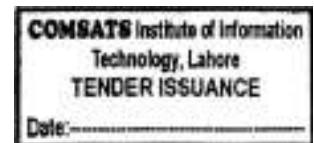
viii. Any unsigned / ambiguous erasing, cutting / overwriting etc. is made.

25. The tendered should furnish a certificate as worded below in token of acceptance of all the terms and conditions of the tender. Otherwise the tender will not be considered under any circumstances.

I / We

- Company / Vendor Name:.....
- Postal Address:.....
- Tel. / Mobile:.....Email:.....
- NTN # :.....GST#:.....

the undersigned certify that the terms and conditions as contained in the documents vise, “ Terms and Conditions for Tender Notice of COMSATS Institute of Information Technology, Lahore are accepted and that in the event of selection of my/our rate the agreement in the prescribed form will be entered into.



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BoQs of Lab Equipment for IRCBM Department

#	Equipment Name	Name	Details/Specifications	Have you facilitated/provided this in your offer?		Quantity Required	Rate to be quoted on CNF Basis (inclusive of freight charges)		
				Yes	No		Quoted Model/Make	Unit Price(C&F Lahore Airport)	Total Price (C&F Lahore Airport)
1	Fluorescent Inverted Microscope	Purpose of the Microscope	Microscope, Digital inverted fluorescence; On-board computer and integrated imaging software; Brightfield and phase contrast; Adjustable intensity LED			01 No			
		Main Body	X-Y stage with fine and coarse focus which should accommodate T75 cell culture flask, glass slides, petri-dishes and well plates						
			Trinocular head						
			Nose-piece with 5 slots minimum						
			Eye Piece 10X, 20 mm or more						
			Phase slider and requisite accessories for phase contrast imaging						
		Objectives	4x Plan Ph						
			10X PLAN FL/PH						
			20X PLAN FL/PH						
			40X PLAN FL/PH						
			60X PLAN FL						
			100X Plan APO FL						
		Imaging	6 Mega Pixel or better digital camera						
		Florescent attachment	Mercury 100W lamp						
			DAPI filter Cube						
			FITC filter cube						
			TRITC filter cube						
Others	Interfaced Computer for image acquisition								
	Software for image acquisition								
Power backup	3 KVa UPS or better with dry batteries which should provide backup for 30 minutes on full load								
Warranty	Minimum period of 1 year								
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#	Equipment Name	Name	Details/Specifications	Have you facilitated/provided this in your offer?		Quantity Required	Rate to be quoted on CNF Basis (inclusive of freight charges)		
				Yes	No		Quoted Model/Make	Unit Price(C&F Lahore Airport)	Total Price (C&F Lahore Airport)
2	Spin Coater	Purpose	To be used as a programmable vacuum spin coater			01 No			
		Structure	Shock and Rust free casing for stable spinning – including plastic/glass cover						
			Drainage outlet						
			Vacuum pump attachment port						
			Rotatable and adjustable height syringe holder						
		RPM	500-5000						
		Control Panel	Digital and programmable						
		Vacuum Chuck	For holding 6 inches and 8 inches wafers						
		Vacuum Pump	120 ml/min oil less						
			Traps/filters for water [2 pieces]						
			Hose for connection with main body						
		Accessories	Adhesives tape for use with irregular shaped substrates < 6 inches in size [1 piece]						
			Electronic single channel pipette 20-200 µL [1 piece]						
			Pipette manual 100-1000 µL [1 piece]						
Power	150 W or better motor								
	220V input								

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#	Equipment Name	Name	Details/Specifications	Have you facilitated/provided this in your offer?		Quantity Required	Rate to be quoted on CNF Basis (inclusive of freight charges)		
				Yes	No		Quoted Model/Make	Unit Price(C&F Lahore Airport)	Total Price (C&F Lahore Airport)
3	UV Curing Machine with Conveyor	Purpose of the UV conveyor	It should be a UV curing unit that is suitable for laboratory R & D applications. It can be used for curing adhesives, UV curable composites for dental application, inks and coatings			01 No			
		Main Body	UV curing System with Benchtop Conveyor includes conveyor unit, lamp and power source, Cure width 6-12 inch,						
		Lamp specifications	Lamp Power: 300 w/in (120 w/cm); 1800 watts total...						
			Bulb Type: Standard style BF9						
			Reflector Geometry for maximum irradiance						
		Belt	Position: Rotatable, 360°; vertical adjustment from focus at belt surface						
			Belt: .25" weave Teflon®-coated Kevlar® fiber, carbon-impregnated with unique fold-back loop seam Direction of Belt Travel: Right-to-left, standard						
		Exhaust System	Self contained cooling system Exhaust Blower: Included, With all standard spare parts and accessories,						
		Connection and controls	Interconnections: Lamp on/off (incorporates zero-speed switch). Controls: Power on/off, speed adjust, lamp on/off						
		Power	220V, single phase, 50/60 Hz, with earthing, CE , IEC style power connection, with power switch and power back up supply						
	Snap on end light shields, Exhaust duct transition, quartz plate air deflectors, special belt for small parts, Stainless steel mesh belt								
Warranty	Minimum period of 1 year								

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#	Equipment Name	Name	Details/Specifications	Have you facilitated/provided this in your offer?		Quantity Required	Rate to be quoted on CNF Basis (inclusive of freight charges)		
				Yes	No		Quoted Model/Make	Unit Price(C&F Lahore Airport)	Total Price (C&F Lahore Airport)
4	Hydrothermal synthesis (a) Batch hydrothermal autoclave (b) continuous hydrothermal flow system	3-way PTFE valve	3-way PTFE valve with single key, should be able to connect to 1/8 inch (outer diameter) PTFE tubing, should include caps and spare O-rings [4 pieces]			01 No			
		PTFE tubing	1/8 inch outer diameter [6 meters]						
			4 mm ID and 6 mm OD [16 meters]						
		PTFE fittings	Straight union reducer 6 mm (OD) - 3 mm (OD) [2 pieces]						
			T-piece 6mm OD [2 pieces]						
		HPLC Pumps	Flow Rate: 0.1 - 25 ml/min (for both low and high pH liquids) with digital display and selection [2 pieces]						
			Maximum Pressure: 6000 psi or better						
			Spares: 1/16 inch 316L SS tubing, 1 meter						
			3-way PTFE valve with single key for liquid flow into pump heads						
			Spare: Seats and O-rings (2 sets each)						
			Tool kit and other necessary spares						
			Spares: 2 outlet and 2 inlet cartridges						

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#	Equipment Name	Name	Details/Specifications	Have you facilitated/provided this in your offer?		Quantity Required	Rate to be quoted on CNF Basis (inclusive of freight charges)		
				Yes	No		Quoted Model/Make	Unit Price(C&F Lahore Airport)	Total Price (C&F Lahore Airport)
5	Electronic Balance Analytical Digital Top loading	Purpose of the electronic balance	Modular designed analytical balance is required for highly accurate weight measurements			01 No			
		Main Body	Vibration resistant						
			Glass draft shield which can open						
		Weighing range	Minimum 60 grams						
		Readability	0.0001 gram						
		Weighing pan size	90-100 mm (millimeter)						
		Warranty	Minimum period of 1 year						
6	Tresopers Benches and Cabinets	Purpose of the Cabinet	It is required for safe and approved storage of toxic reagents			01 No			
		Other	90 min fire rated						
			External dimensions W x D x H (mm): 900 x 615 x 1955						
			Internal Dimensions W x D x H (mm) 750 x 522 x 1645						
			Automatic door closing system						
			Width of cabinet 3 feet						
			Max Load 600 Kg						

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#	Equipment Name	Name	Details/Specifications	Have you facilitated/provided this in your offer?		Quantity Required	Rate to be quoted on CNF Basis (inclusive of freight charges)		
				Yes	No		Quoted Model/Make	Unit Price(C&F Lahore Airport)	Total Price (C&F Lahore Airport)
7	Cold Storage	Purpose	To Perform reaction at low temperature in a controlled environment			01 No			
		Main body	Inner Dimensions (LxWxH): 3'x3'x3'						
			Copper Pipping with High grade insulation						
			Non-corrosive Panels and Insulated floor						
			Internal and External Safety Glass Sheets						
		Others	Suction pressure regulators with related accessories						
			Temperature Range: -5C to 37C						
			Power Source: 380-440 Watt						
			Digital temperature control, filter dryer, expansion valves						
			Digital Control Panel						
8	Over-head Stirrer	Purpose of Overhead Stirrer	The Overhead Stirrer should be suitable for stirring 40 liters of fluid with a minimum viscosity of 50000 mPas			01 No			
		Main Features	RPM: 0-1500						
			Suitable Minimum Viscosity: 50000 mPas						
			Large chuck diameter for many shafts: Chuck Diameter: 0.5 – 13 mm						
			Digital Display						
			Analog speed control						
			Speed Display Resolution: 1 RPM						
			Input voltage: 220 V						
			Over-torque protection						
		Warranty	1 Year						

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#	Equipment Name	Name	Details/Specifications	Have you facilitated/provided this in your offer?		Quantity Required	Rate to be quoted on CNF Basis (inclusive of freight charges)		
				Yes	No		Quoted Model/Make	Unit Price(C & F Lahore Airport)	Total Price (C&F Lahore Airport)
9	3-D Printer	Purpose	The 3-d printer should facilitate 3 dimensional precision printing of polymers and composites in powdered and liquid forms. Its accessories should facilitate the aforementioned tasks and also facilitate capturing of printable 3D drawings/images.			01 No			
		Main Body	Rust free and shock proof small footprint with a minimum of 9 inches x 9 inches build platform and plugs into a PC with USB cable						
		Printing	Controllable extrusion/pressure driven extrusion						
			1 Dual syringe/cartridge head (which allows for extrusion of two materials)						
			1 (one) Single syringe/cartridge head						
			3-axis controlled movement						
		Accessories/ Spares	2 (two) Motors (to facilitate 3 axis movement of the head)						
			Belts (to replace the whole set of belts at least 1 time) – quantity as required						
			10 (ten) Pistons (which attach to tool head to facilitate extrusion – they should seal tightly with the cartridges)						
			10 (ten) Syringes/Cartridges for fitting into the heads (multiple sizes if possible)						
10 (ten) Multiple diameter tips for syringes/cartridges to facilitate different resolutions									
Suitable CAD software for interfacing with 3-D printer and 3-D scanner									
	3D scanner for maximum object size of 8 inch diameter and 8 inch height, minimum object height of 0.39 inches and minimum object diameter 0.39 inches, 50-150 microns resolution or better, Output file formats should be usable through provided software and 3-D printer								
	Desktop computer for softwares and use with 3-D printer and related accessories such as 3D scanner								

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#	Equipment Name	Name	Details/Specifications	Have you facilitated/provided this in your offer?		Quantity Required	Rate to be quoted on CNF Basis (inclusive of freight charges)		
				Yes	No		Quoted Model/Make	Unit Price(C&F Lahore Airport)	Total Price (C&F Lahore Airport)
10	Biological Safety Cabinet	Purpose of the Biological Safety Cabinet	It is to be a Class II A2 biosafety cabinet which assists sterile work for mammalian cell culture			01 No			
		Main Body	interior and exterior made of stainless steel						
			noise level less than 65 dBA						
			working space should be approx 4 - 5 ft						
			less than 70% of air circulation						
			average air flow 50 ± 20 rfm						
		Standard features	Air pressurization system should be statically and dynamically balanced, fitted with special vibration reducing system to suit low noise and vibration.						
			Front door should be made of toughened glass (6 mm or more), verticle sliding, with meatallic piece for finger tip control Flouresenct and UV light						
			Spillage trough (stainless steel) below the working table, with a drain cock.						
			Audible alarm to warn the operator if the window is raised above the recommended height of 8 inches						
		Filter	99.99% efficiency for 0.3 µm or smaller particles						
			Installation, validation/ performance demonstration						
		Others	Provision of suitable power supply/UPS						
			Warranty	Minimum of 3 Years					

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#	Equipment Name	Name	Details/Specifications	Have you facilitated/provided this in your offer?		Quantity Required	Rate to be quoted on CNF Basis (inclusive of freight charges)		
				Yes	No		Quoted Model/Make	Unit Price(C&F Lahore Airport)	Total Price (C&F Lahore Airport)
11	Ion selective electrodes	Purpose	To measure pH and direct ion measurement			01 No			
		Main Body	Both manual and automatic ISE calibration						
			Point to point ISE calibration with high and low concentration range						
			Handheld meter, allowing meter to be immersed in water to a depth of 1m for 1hr without any water incursion						
			extended life battery for up to minimum 2000 hr						
			automatic and manual pH calibration						
			ISE connectors and USB interface						
			Electrode	Reference Electrodes [1 piece]					
		Fluoride [1 piece]							
		Silver [1 piece]							
		Calcium [1 piece]							
		Nitrate [1 piece]							
		Sodium [1 piece]							
		Potassium [1 piece]							
		Carbondioxide [1 piece] pH electrode							
		Others	Digital temperature control, filter dryer, expansion valves Digital Control Panel						
			All required Buffer Solutions						
			All required Standard Solutions						
			All required Calibration Solutions (10Molar to 0.001 Molar)						
			Ion Analyzer Software						
PC with printer									

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#	Equipment Name	Name	Details/Specifications	Have you facilitated/ provided this in your offer?		Quantity Required	Rate to be quoted on CNF Basis (inclusive of freight charges)		
				Yes	No		Quoted Model/ Make	Unit Price(C&F Lahore Airport)	Total Price (C&F Lahore Airport)
12	Ice Machine	Purpose of the Ice machine	It is to be an Ice machine, which facilitates ready ice in the form of hard bits for multiple purposes such as carrying biological material or carrying out chemical reactions in labs			01 No			
		Features	Robust and low maintenance						
			Easy to clean						
			Ambiant temperature range 10-43 degree C						
			Heavy duty cabinet for corrosion resistance						
			Temperature range -20 to -7 degree Celsius						
		Capacity and dimensions	Ice production 100-400lb						
			Free standing/ able to fit under a cabinet						
Warranty	Minimum period of 1 year								
13	Water Bath	Purpose of the Water bath	Should facilitate thawing, heating and incubation material for different biological applications while shaking			01 No			
		Features	With bath circulation for high temperature stability and uniformity						
			Electronic timer 0-10h						
			Working temperature range: 5 °C above ambient temperature to 99.9°C.						
			Temperature accuracy ± 1 °C						
			Water level regulator						
			Width 70-75 cm , Depth 30-45cm, Height 25- 35cm						
			Shaking amplitude 15-22mm						
		Filling Volume minimum 10 L							
Warranty	Minimum Period 1 Year								

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#	Equipment Name	Name	Details/Specifications	Have you facilitated/ provided this in your offer?		Quantity Required	Rate to be quoted on CNF Basis (inclusive of freight charges)		
				Yes	No		Quoted Model /Make	Unit Price(C&F Lahore Airport)	Total Price (C&F Lahore Airport)
14	Centrifuge	Purpose	An essential equipment in cell culture facility			01 No			
		Rotor	accommodate atleast four to sixteen 50 ml falcon tube						
			Rotor/Adaptors for 15 ml tube						
			Plate rotor						
		Temperature Range	-9 to +40 °C with pre-cooling system						
		General Features	Low noise						
			Digital display						
			Timer: upto 99 minutes with continuous mode						
			Accel/Braking ramps; 10/10						
		Speed Range	500 - 8000 rpm						
Others	Instillation, validation/ performance demonstration								
	Provision of suitable power supply/UPS								
Warranty	Minimum period of 1 year								
15	Electrophoresis	Purpose	An essential instrument to validate the separation of DNA, RNA and proteins molecules			01 No			
		Chamber	- 35 °C ± 3 °C						
		Accessories	8-20 well combs						
			UV transparent gel trays						
			Power Supply						
		Buffer Capacity	upto 500 ml						
			UV light source (UV Transilluminator),						
			Digital Imaging system/camera						
			Gel Analysis software						
			Computer and printer						
Provision of suitable power supply/UPS (2 KVA UPS with dry batteries)									

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		Warranty	Minimum period of 1 year						
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#	Equipment Name	Name	Details/Specifications	Have you facilitated/provided this in your offer?		Quantity Required	Rate to be quoted on CNF Basis (inclusive of freight charges)		
				Yes	No		Quoted Model/Make	Unit Price(C&F Lahore Airport)	Total Price (C&F Lahore Airport)
16	Liquid Nitrogen Tank	Purpose	It is to be a cryogenic liquid nitrogen storage container which facilitates large vial capacity in box type racks for storage of cells			01 No			
		Features	Facilitates storage of 5X5 10X10 cryoboxes						
			Static holding time must be no less than 100-160 days						
			Level indication						
			Facilitates vapor and liquid phase storage						
			Alarms for lid open and low nitrogen level						
			Temperature display						
			Alarms for high temperature						
		Capacity and dimensions	81-160L of liquid nitrogen						
			Less than 0.9 l / day evaporation rate						
Height 650-800mm									
Neck Larger than 200mm									
Warranty	Minimum period of 1 year								
17	CRYOSTAT	Purpose	An essential instrument to facilitate the microscopic study of frozen tissue sections			01 No			
		Chamber Temperature	- 35 °C ± 3 °C						
		Defrost	Immediate / programmed						
		Trim Thickness Range	5 - 500 µm						
		Others	Instillation, validation/ performance demonstration						
			Provision of suitable power supply/UPS						
Warranty	Minimum period of 1 year								

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#	Equipment Name	Name	Details/Specifications	Have you facilitated/provided this in your offer?		Quantity Required	Rate to be quoted on CNF Basis (inclusive of freight charges)		
				Yes	No		Quoted Model/Make	Unit Price(C&F Lahore Airport)	Total Price (C&F Lahore Airport)
18	Precision Rotary Microtome	Purpose	Precision Cutting of Hard Tissues			01 No			
		Other Features	Tabletop version						
			Precision cut-off machine with movable cutting table						
			Automatic feeding with electronic control of feed speed						
			Both motorized and manual operation						
			Specimen holder's, additive for cooling fluid						
			Recirculation cooling unit						
			Total lateral movement of 30 mm						
			Forward movement up to 50 mm						
			Cut-off wheels						
			Clamping tools for holding sample						
Variable speed maximum 3000 rpm									
19	Incubator	Purpose	An essential equipment for optimum mammalian cell culture			01 No			
		Main Body	Exterior: stainless steel, coated						
			Interior: mirror finish, stainless steel						
			Shelves: perforated, stainless steel						
		CO2	CO2 concentration range: 0 - 20%						
			CO2 Sensor: Infrared or T/C						
			1 high purity CO2 cylinder with CO2 gas and dual cylinder regulator						
		General Features	Temperature: Ambient +3 to 55 °C						
			Built- in auto decontamination						
			Exterior (W×H×L) inch: equal or less than (30×40×30)						
			HEPA / ULPA filters						
Others	Installation, validation/ performance demonstration								
	Provision of suitable power supply/UPS								
Warranty	Minimum period of 1 year								

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#	Equipment Name	Name	Details/Specifications	Have you facilitated/ provided this in your offer?		Quantity Required	Rate to be quoted on CNF Basis (inclusive of freight charges)		
				Yes	No		Quoted Model/Make	Total Price (C&F Lahore Airport)	Total Price (C&F Lahore Airport)
20	Power Supply	Purpose of Power Supply	It is to be a Power Supply with Pulse-Reverse and programming function to set a range of current/voltage wave forms			01 No			
		Main Features	Effective current 5 A						
			Minimum forward and reverse current @ 20 Volts, 10 A						
			Current setting resolution, ± 1 mA						
			Time setting resolution, 1 mA						
			Integrated Control Unit (LC-Display, Keypad) for manual mode operation						
			Switchable to auto mode via serial communication (RS 485) or USB port						
			Setting of complex wave form (square wave/ pulse wave) with graphical display to show adjusted output waveform						
			Operational mode: Constant current and pulse-reverse current through manual or auto mode						
		Time Programming options	The output waveform can be programmed with a minimum in 10 different steps						
			The individual current set-points of each step can either be positive or negative (i.e. forward or reverse).						
			Time of each step for constant current: 0 – 10 seconds						
			Time setting resolution: .1 - 1 milliseconds						
			Time of each step for forward and reverse current: 0 – 10 seconds						
			Time setting resolution: 0.1 - 1 milliseconds						
Cycles (repeating per step): 50 or greater									
Regulation range: 2 – 100%									
Sequence Run Time: 1 second – 24 hours									
Warranty	Minimum period of 1 year								

- Price should be quoted of every single item inclusive of all freight charges on the prescribed BoQs form only. Do not use your own company letter head; otherwise your bid will be rejected.

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- Kindly tick/mark the Yes/No Column on our prescribed BoQs, do not use your own letter head. Otherwise your bid/tender will be rejected.

BoQs of Glasswares

Sr. Nr.	Name	Quantity	Rates to be Quoted in PKR (Inclusive of all taxes)	
			Unit Price (Rs)	Total Price (Rs)
1.	centrifuge tubes 2 ml	5 packsx1000		
2.	centrifuge tubes 1.5 ml	5 packsx1000		
3.	Falcon tube 15ml (Orange capped)	5 packsx1000		
4.	Falcon tube 50ml (Orange capped)	5 packsx1000		
5.	Falcon tube 15ml (Blue capped)	5 packsx1000		
6.	Falcon tube 50ml (Blue capped)	5 packsx1000		
7.	Falcon tube 15ml (Green capped)	5 packsx1000		
8.	Falcon tube 50ml (Green capped)	5 packsx1000		
9.	Filter paper Sheet	1 pack		
10.	Pasteur pipettes 3-5 mL plastic	1000		
11.	Litmus paper (Red)	1pack		
12.	Litmus paper (Blue)	1pack		
13.	Magnetic stirrers 6.5 cm x	1		
14.	Magnetic stirrers 5.5 cm x	5		
15.	Magnetic stirrers 3.5 cm x	5		
16.	Magnetic stirrers 2.5 cm x	5		
17.	Magnetic stirrers 1 cm x	5		
18.	Measuring flask(Glass) 500 mL	2		
19.	Measuring flask(Glass) 250 mL	2		
20.	Measuring flask(Glass) 100 mL	2		

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21.	Measuring flask(Glass) 50 mL	2		
22.	Micropipette tips 0.5-10ul (white)	5 pack		
23.	Micropipette tips 2-200ul (yellow)	5 pack		
24.	Micropipette tips100-1000ul (blue)	5 pack		
25.	Parafilm rolls 4 In x 125 Ft.	5		
26.	Petri plates Plastic	1000		
27.	PH Strips (0-14) boxes	5pack		
28.	Reagent bottles	6		
29.	Paper Tape	12 pack		
30.	Syringe with Nozzle (Glass) 10mL	3		
31.	Syringe with Nozzle (Glass) 20mL	3		
32.	Syringe needles(glass hypo syringe)	4		
33.	Scissors small size	6		
34.	Autoclave bags	6 packs		
35.	Test tubes Stand	6		
36.	Polyurethane tube stand (for 50mL falcon tubes)	12		
37.	Polyurethane tube stand (for 15mL falcon tubes)	6		
38.	Tripod Stands	6		
39.	Timer (Digital)	6		
40.	Wash bottles	2		
41.	Watch glass	14		
42.	Stands for reaction eppendorfs	24		
43.	Muller Hinton Agar	500gm		
44.	Lb broth	500gm		
45.	Nutrient Agar	500g		

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46.	Petri Dishes with lid 90x20 mm (glass)	100		
47.	Glass Funnel 75mm	24		
48.	Glass Rod 12 inch 30cm	25		
49.	Cleaning brush (bottle brush)	3		
50.	Antistatic cleaning clothe	10		
51.	Styrofoam containers for eppendorfs/falcons	5		
52.	Vertical racks for cryoboxes (8box rack)	1		
53.	Cryobox (9x9 tubes)	12		
54.	Cuvettes (10x10x45), volume 1.6mL	200		
55.	Cryo gloves (Large size)	1 pair		
56.	Syringe filters	10		
57.	Filter Circles (1um and 2.7um)	2 packs each		
58.	Microscope glass slides	10 packs		
59.	Cover slips	10 packs		
60.	Cavity glass slides	5 packs		
61.	Micro preparation Forceps (finely pointed, stainless steel)	4		
62.	well plate (6, 24, 96wells)	25 each		
63.	Scapal blades (size 20, 22)	2packs each		
64.	Aluminum foil	2 rolls		
65.	Steam sterilization indicator tape (for autoclave)	5 rings		
66.	Tip boxes (for blue, yellow and white tips)	5 each		
67.	Stripette pipettes (5, 10, 15, 25 mL)	100 each		
68.	Pipetting aid	1		
69.	Pipette filler/bulb	5		

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70.	Pipetting pumps	10		
71.	Pipette pack (0.5-10, 10-100, 100-1000uL)	3sets		
72.	Pipette research, multichannel (10-100ul)	1		
73.	Disposable reagent reservoir for multichannel pipette	1set		
74.	Micro pipette holder (wall fixation)	3sets		

BoQs of Polymer Synthesis

Sr. Nr.	Chemicals Required	CAS	Quantity	Rates to be Quoted in PKR (Inclusive of all taxes)	
				Unit Price (Rs)	Total Price (Rs)
1.	Polyethyleneglycol (PEG)	81242 M _n =4000	1 KG		
2.	Poly lactide-co-glycolic acid (PLGA)	430471	5 G		
3.	Triacetin	525073-1L	1 L		
4.	Eudragit E100				
5.	Myristic acid		1 KG		
6.	Trifluoroacetic Acid		500 mL		
7.	Glutaraldehyde		100 mL		
8.	Hydroxypropyl Methycellulose		500 G		
9.	poly(glycolic acid) (PGA)	26124-68-5	10G		
10.	poly(3-hydroxybutyrate)	625-72-9	1G		
11.	poly(3-hydroxybutyrate-co-3-hydroxyvalerate) (PHBV)	80181-31-3	10G		
12.	polycaprolactone diol	36890-68-3	250G		
13.	Polycaprolactone (PCL)	24980-41-4, M _n = 80,000	250G		
14.	1,3-Bis(4-carboxyphenoxy)propane	3753-81-9	5G		
15.	1,6-Bis(p-carboxyphenoxy)hexane	74774-53-1	5G		
16.	poly(propylene glycol) (PPG)	25322-69-4, M _n = 1000	250 G		
17.	Poly[(R)-3-hydroxybutyric acid] (PHB)	29435-48-1	10G		
18.	Poly(3-hydroxybutyrate-co-3-hydroxyvalerate) (PHBV)	80181-31-3	10G		

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19.	Poly(bis(phenoxy)phosphazene)	28212-48-8	250 mg		
20.	Poly(ethylene glycol) diacrylate (PEGDA)	26570-48-9, Mn =700	100 ml		
21.	PEG dimethacrylate (PEGDMA)	25852-47-5, Mn= 750	250 ml		
22.	poly L lactide (PLA)	33135-50-1, Mw ~260,000	10G		
23.	poly(D-lactic acid) (PDLA)	106989-11-1, Mn ~90000	100 mg		
24.	poly(D,L-lactic acid) (PDLA)	26680-10-4, Mn = 18,000- 24,000	5G		
25.	Poly(lactide-co-glycolide) (PLGA),	26780-50-7, Mw = 30,000- 60,000	5G		
26.	(Bis-GMA)Bisphenol A glycerolate dimethacrylate	1565-94-2	100 ML		
27.	Toluene 2,4-diisocyanate (TDI)	584-84-9	100G		
28.	2-Hydroxyethylmethacrylate (HEMA)	868-77-9	500G		
29.	tripropylenglycol diacrylate (TPGDA)	42978-66-5	100G		
30.	ethyl 4-dimethylaminobenzoate(EDM AB)	10287-53-3	100G		
31.	Camphoroquinone (CQ)	10373-78-1	5g		
32.	Triethylene glycol dimethacrylate (TEGDMA)	109-16-0	250 ml		
33.	1,6-hexanediol dimethacrylate	6606-59-3	100 ml		
34.	2-(dimethylamino)ethyl methacrylate	2867-47-2	100 ml		
35.	Di-butyltin dilaurate	77-58-7	100G		
36.	Methacrylic acid	79-41-4			
37.	4,4-Methylenediphenyldiisocyanate (MDI)	101-68-8	100 mg		
38.	Isophorone diisocyanate (IPDI)	4098-71-9	250 ml		
39.	N,N-dimethyl aminoethyl methacrylate (DMAEMA)	2867-47-2	100 ml		
40.	poly (ethylene oxide)	Mv = 100,000	250G		

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41.	poly (ethylene oxide)	Mv = 300,000	250G		
42.	N- (3(Trimethoxysilyl)propyl) ethylenediamine, 97%	1760-24-3	100G		
43.	3- Glycidoxypropyltrimethoxysilane	2530-83-8	500g		
44.	Chitosan	9012-76-4 Mv = 100,000- 300,000	100g		
45.	Nicotinamide adenine dinucleotide phosphate (NADP)	24292-60-2	50MG		
46.	Pyrrole	109-97-7	100ml		
47.	Glucose oxidase	9001-37-0	50 KU		
48.	benzaldehyde	100-52-7	500 ml		
49.	polyacrylonitrile	25014-41-9	50G		
50.	Alcohol Oxidase	9073-63-6	100un		
51.	Dopamine hydrochloride	62-31-7	10G		
52.	urethane dimethacrylate	X-850-0000	1kg		
53.	Propionic acid	CAS Number 79-09-4	500mL		
54.	formic acid	F0507-1L	1L		
55.	Bisphenol A-Glycidyl Methacrylate (BIS-GMA)	CAS No: 996-19-0.	1kg		
56.	Camphorquinone	10373-78-1	5g		
57.	HEMA	868-77-9	500g		
58.	1-methylimidazole	616-47-7	500g		
59.	BISGMA	1565-94-2	100ml		
60.	TEGDMA	109-16-0	250ml		
61.	lead nitrate	10099-74-8	500g		
62.	butyl chloride(1-chloro-butane)	109-69-3	1L		
63.	1-butyl-3-methylimidazolium chloride	79917-90-1	50g		
64.	EDB(ethyl-4-dimethylaminobenzoate)	10287-53-2	100g		
65.	microcrystalline cellulose	9004-34-6	250g		
66.	cellulose acetate	9004-35-7	500g		
67.	Chitosan	9012-76-4	250g		

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68.	copper sulphate pentahydrate	7758-99-8	500g		
69.	Polysulfone	25135-51-7	100g		
70.	BISEMA	41637-38-1	500ml		
71.	MPS(gamma-methacryloxypropyl trimethoxysilane)	2530-85-0	100ml		
72.	nitric acid	7697-37-2	500ml		
73.	N-Phenylglycine	103-01-5	25g		

BoQs of Chemicals

Sr. Nr.	Chemicals Required	CAS	Quantity	Rates to be Quoted in PKR (Inclusive of all taxes)	
				Unit Price (Rs)	Total Price (Rs)
1.	Dexamethasone water soluble	50-02-2	100 MG		
2.	Beta Glycerophosphate Di Sodium Salt Hydrate	154804-51-0	100G		
3.	P-Nitophenyl phosphate tablets		50 Set		
4.	Diethanolamine	111-42-2	1KG		
5.	Ethidium bromide	1239-45-8	1G		
6.	Sodium tartrate dibasic dihydrate	6106-24-7	100G		
7.	nonylphenoxy polyethoxy ethanol	26207-38-5	100G		
8.	Agrose High Melting	9012-36-6	25G		
9.	Agrose Low melting point	39346-81-1	5G		
10.	Tween 20	9005-64-5	100 g		
11.	B-Mercaptoethanol	60-24-2	1L		
12.	DEPC Treated Water	7732-18-5	1L		
13.	PBS Tablets		200 Tablets		
14.	Boric Acid	10043-35-3	500g		
15.	EDTA	60-00-4	500g		
16.	Tris Base		6X1L		
17.	cDNA Kit	170-8890	25x25uL		
18.	RNA Isolation Kit		50Prep		

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19.	dNTP		1MMO		
20.	MgCl ₂	7786-30-3	100G		
21.	Buffer		1.5ML		
22.	Taq Polymerase		50UN		
23.	PCR Kit		50 prep		

BoQs of Raw Material

Sr. Nr.	Name	Details	Quantity	Rates to be Quoted in PKR (Inclusive of all taxes)	
				Unit Price (Rs)	Total Price (Rs)
1.	316 L Stainless steel rod	10 mm diameter	1 meter		
2.	304 Stainless Steel rod	70 mm diameter (4 lengths of 1 foot each)	4 feet		
3.	316 L Stainless steel sheet	1 mm thickness	10 square feet area		
4.	Titanium sheet	1 mm thickness	4 square feet		
5.	Titanium rod	10 mm diameter	1 meter		
6.	Diamond suspension	3 micron	1 litre		
7.	Diamond suspension	1 micron	1 litre		
8.	Alumina crucibles	10 mL	20		
9.	Alumina crucibles	20 mL	20		
10.	Alumina boats	7-8 cm length	200		
11.	Diamond Polishing Cloth	for use with 3 micron diamond suspension	10		
12.	Diamond Polishing Cloth	for use with 1 micron diamond suspension	10		
13.	HDPE Rectangular bar	10 mm x 10 mm x 1000 mm	1		
14.	316 Stainless steel powder	Average size < 150 microns	1 Kilogram		
15.	316 Stainless steel powder	Average size < 50 microns	1 Kilogram		
16.	1/8 inch 316L SS Tubing	tube wall = 0.028 inch, working pressure = 8500 psi, straight lengths of 6 meter each	12 meters		
17.	1/16 inch 316L SS Tubing	tube wall = 0.014 inch, working pressure = 8100 psi	3 meters		

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18.	1/4 inch 316L SS Tubing	tube wall = 0.049 inch, working pressure = 7500 psi, straight length of 6 meter each	30 meters		
19.	3/4 inch 316L SS Tubing	tube wall = 0.065 inch, working pressure = 3300 psi, straight lengths of 3 meter each	6 meters		
20.	B-type oil	for for rotary vane vacuum pumps	5 litre		
21.	316 L stainless steel fitting	10 mm diameter	6		

BoQs of General Purpose Reagents

Sr. Nr.	Chemicals Required	CAS	Quantity	Rates to be Quoted in PKR (Inclusive of all taxes)	
				Unit Price (Rs)	Total Price (Rs)
1.	Calcium Hydroxide 98.0% purity or better	546-68-9	5 Kg		
2.	Orthophosphoric Acid 85+% or better	7664-38-2	5 litres		
3.	Titanium (IV) isopropoxide 98+% or better	546-68-9	500 mL		
4.	Nickel sulfate	10101-97-0	500g		
5.	Thiourea	62-56-6	500g		
6.	Urea	57-13-6	500g		
7.	Bismuth(III) nitrate pentahydrate	10035-06-0	100g		
8.	Potassium chloride	7447-40-7	500 g		
9.	Cerium(III) nitrate hexahydrate	10294-41-4	25 g		
10.	Tungsten(VI) chloride	13283-01-7	100 g		
11.	Chromium(VI) oxide	1333-82-0	250 g		
12.	Aluminum hydroxide	21645-51-2	500 g		
13.	Scandium(III) Nitrate Hydrate	107552-14-7	1 g		
14.	Zirconyl nitrate solution	13826-66-9	100 ml		
15.	Cobalt(II) nitrate hexahydrate	10026-22-9	100 g		

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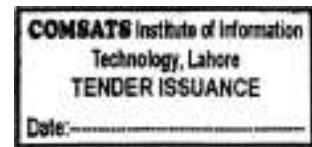
16.	Calcium nitrate tetrahydrate	13477-34-4	500 g		
17.	Tetraethyl orthosilicate	78-10-4	25 ml		
18.	Trioctyl Phosphine	4731-53-7	100ML		
19.	Zinc stearate	557-05-1	3KG		
20.	Copper(I)iodide	7681-65-4	100g		
21.	Indium- (III)acetate	25114-58-3	50G		
22.	1-dodecanethiol	112-55-0	500ML		
23.	1-octadecene	112-88-9	1L		
24.	Oleylamine	112-90-3	500G		
25.	Zinc ethylxanthate	140-89-6	100G		
26.	Dimethylformamide	68-12-2	3X1.2ML		
27.	Thioglycerol	96-27-5	100ML		
28.	Ethylene Glycol	107-21-1	1L		
29.	Kaolin	.	5kG		
30.	Perioglas		2 Pack		
31.	Bentonite	1302-78-9	1Kg		
32.	Carbon nanotubes	308068-56-6	50 g		
33.	montmorillonite	1318-93-0	1Kg		
34.	Halloysite nanoclay	1332-58-7	500 g		
35.	1,4-dioxane	123-91-1	1 L		
36.	Gelatin	9000-70-8	500 g		
37.	Pluronic F127		250g		

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BoQs of Cell lines

Sr. Nr.	Cell Lines	specification	Quantity	Rates to be Quoted in PKR (Inclusive of all taxes)	
				Unit Price (Rs)	Total Price (RS)
1.	Keratinocytes (PCS200-011)	Homo sapiens, human, Skin (epidermis)	1ml		
2.	MC3T3	mouse (Mus musculus) preosteoblast, bone/calvaria	1ml		
3.	Schwann Cells (S16Y)	Rattus norvegicus, rat, sciatic Nerve	1ml		

- Price should be quoted of every single item on the prescribed BoQs form only. Do not use your own company letter head; otherwise your bid will be rejected.



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