1. Technical Specification of Semi-Automated Biochemistry Analyzer

S.N.	Purchaser's Specifications	Bidder Compliance Sheet		
	Semi-Automated Biochemistry Analyzer	Yes/No	Page no in Catalogue	Remarks
	Manufacturer			
	Brand			
	Type / Model			
	Country of Origin			
1	Description of Function			
1.1	The Semi-automated Bio-chemistry Analyzer measures biochemical indexes by analyzing blood and other body fluid, then combines with other clinical information, to help diagnose disease, evaluate organs function.			
2	Operational Requirements			
2.1	Semi-automated Chemistry Analyzer with built in software for the calculation and curve plotting. It must accept all types of curve fits like log-linear, Exponential, point to point.			
3	System Configuration			
3.1	Semi-automated chemistry Analyzer within built data processor & touch LCD/LED display, inbuilt thermal printer and RS 232 serial port for bidirectional communication or USB etc.			
4	Technical Specifications			
4.1	Light Source : Halogen Lamp or LED			
4.2	Must have minimum 5" color touch screen operation for user friendly operation			
4.3	Wavelength Range: Automatic selection by at least 7 position filter wheel ranging 340 - 620 nm and 2 more open filter positions			
4.4	Photometric Range: 0 to 3.0 Absorbance.			
4.5	Memory for up to 200 test Storages and 1000 Test results			
4.6	Machine Should have three levels of temperatures i.e. 25°C, 30°C and 37°C for incubator and flow cell.			
4.7	Calculation Modes:			
a	Absorbance/concentration			
b	End point with factor and standard.			
c	Fixed time with factor and standard.			
d	Kinetic mode with factor and standard.			
4.8	Option for cuvette mode and aspiration mode.			
4.9	Aspiration system: Programmable sipping volume from 300-500 µl			
4.10	Program:			
	• High/Low flags.			
4.11	Flow Cell- 10 mm path length			
4.12	Temperature control by Peltier element			
4.13	Inbuilt heating Block of minimum 20 positions must be available			
5	Accessories, spares and consumables			

बायोमेडिकल इन्जिनियर

5.1	All standard accessories, consumables and parts required to operate the equipment, including all standard tools and cleaning and lubrication materials, to be included in the offer.			
6	**Operating Environment**			
6.1	The system offered shall be designed to be stored and to operate normally under the conditions of the purchaser's country. The conditions include Power Supply, Climate, Temperature, Humidity, etc.			
6.2	Power supply: 220 - 240 VAC, 50Hz fitted with appropriate plug.			
7	**Standards and Safety Requirements**			
7.1	Compliant with ISO 13485 standard Quality for Medical Devices.			
7.2	CE (European) or USFDA (510K) approved product certificate.			
7.3	Shall meet IEC 61010-2-081safety requirements for electrical equipment for measurement, control, and laboratory use - Part 2- 081: Particular requirements for automatic and semi-automatic laboratory equipment for analysis and other purposes. Document evidence shall be submitted for evaluation			
8	**Installation , Commissioning &User Training**			
8.1	Supplier must accomplish proper installation and commissioning of the equipment onsite.			
8.2	Must provide user training (including how to use and maintain the equipment)			
9	**Warranty & Maintenance Service During Warranty Period**			
9.1	Comprehensive warranty for 2 year after acceptance.			
9.2	During warranty period supplier must ensure preventive maintenance and corrective/breakdown maintenance whenever required			
10	**Documentation**			
10.1	User (Operating) manual in English			
10.2	Service (Technical / Maintenance) manual in English			
10.3	Should submit the price list for spare parts, accessories.			
10.4	Certificate of calibration and inspection from factory.			

Bidder must completely fill the Technical Specification Form (TSF). Only Yes/no/all complies should not be written. Page number in the catalogue of all the required parameters must be clearly mentioned and highlighted. Failure in doing so may lead to rejection of bid from technical committee.

बायोमेडिकल इन्जिनियर

2. Hematology Analyzer (3 part)

S.N.	Purchaser's Specification	Bidder's Compliance Sheet		
	Hematology Analyzer (3 part Differentiation)	Yes /No	Page no in Catalogue	Remarks
	Manufacture			
	Brand			
	Type/ Model			
	Country of Region			
1	Description of Function			
✓ 1.1	A hematology analyzer is a specialized medical instrument designed to analyze blood samples for various parameters related to blood cells. Hematology analyzers play a crucial role in diagnosing and monitoring various blood disorders and conditions.			
2	Operating Environment			
2.1	The working environment of a 3-part hematology analyzer is designed to be efficient, accurate, and user-friendly, allowing for the rapid analysis of blood samples and providing valuable information for healthcare professionals in the diagnosis and monitoring of various medical conditions and measures minimum 24 parameters.			
3	System configuration			
3.1	A typical 3-part hematology analyzer consists of a sample processing system with modules dedicated to analyzing red blood cells, white blood cells, and platelets. Utilizing technologies such as electrical impedance and flow cytometry, the analyzer includes fluidic systems for sample and reagent management, a central processing unit with dedicated software for data analysis, and a user interface for input and result display. The system is equipped with quality control features, calibration mechanisms, and connectivity options for seamless integration into laboratory workflows.			
4	Technical specification			
✓4.1	Principle: PhotoElectrical and impedance method. Impedance for counting WBC, RBC & PLT, cyanide free colorimetric(HGB) method			
✓4.2	Parameter : 3 part, 24 parameters, 3 Histograms			
✓4.3	Report parameter : Minimum 24 report parameter- WBC, LYM#, MID#,NEU#,LYM%,MID%,NEU%,RBC,HGB,HCT,MCV,MCH,MCHC,RDW-CV,RDW-SD,MPV,PDW-SD, PDW-CV,P-LCR, P-LCC, PLT, PCT, NLR, PLR			
4.4	Should alarm for confirmed and seemingly abnormal samples, allow self-setting			
✓4.5	Sample: Three Sample mode: - Whole blood (aprrox.10uL), capillary blood (10ul approx.), pre diluted blood (approx. 20ul)			
4.6	Sample Method : Open or close vial type			
✓4.7	Throughput : not less than 60 sample per hour			
✓ 4.8	Performance : WBC (Repeatability ≤ 2.0%,Linearity range 0.0-200x10^9/L), RBC (Repeatability ≤ 2.0%,Linearity range 0.0-8.0x10^{12}/L), HGB (Repeatability ≤ 2.0%,Linearity range 25.0-250g/L), MCV			

बायोमेडिकल इन्जिनियर

	(Repeatability ≤ 1.0%), PLT (Repeatability ≤ 4%,Linearity range 0.0-4000x10^9/L)			
4.9	Easy operation by big touch screen function (Display at least 10")			
4.10	Control Mode : L-J, X-R, X-B			
4.11	Daily Maintenance automatically by on & off. One key to remove error automatically.			
4.12	Automatic Sleep Status must be available			
4.13	Should support minimum reagent consumption. (Machine that must require Diluent & Lyse in daily routine test)			
5	**Accessories, Spare and Consumables**			
5.1	All standards accessories, consumables and parts required to operate the equipment, including all standard tools and clearing and lubrication materials, to be included in the offer. Bidders must specify the quantity of every item included in their offer (including items not specified above)			
6	**Operating Environment**			
6.1	The product offered shall be designed to be stored and to operate normally under the conditions of the purchaser's country. The Conditions include power supply, purchaser's country requirements.			
6.2	Power supply 220V -240VAC, 50Hz fitted with appropriate plug.			
7	**Standards and Safety Requirements**			
7.1	Must submit CE / USFDA(510K) compliance certificate			
7.2	Must submit ISO13485standards for Medical Devices documents AND			
7.3	Shall meet IEC 61010-2-081safety requirements for electrical equipment for measurement, control, and laboratory use - Part 2- 081: Particular requirements for automatic and semi-automatic laboratory equipment for analysis and other purposes. Document evidence of the report must be submitted for evaluation			
8	**Installation and Commissioning &User Training**			
8.1	Supplier must accomplish proper installation and commissioning of the equipment onsite.			
8.2	Must provide user training (including how to use and maintain the equipment)			
9	**Warranty & Maintenance Service During Warranty Period**			
9.1	Comprehensive warranty for 2 years after installation			
9.2	During warranty period supplier must ensure preventive maintenance and corrective/breakdown maintenance whenever required			
10	**Documentation**			
10.1	User (Operating) manual in English			
10.2	Service (Technical / Maintenance) manual in English			
10.3	List of important spare parts and accessories with their part numbers and costing.			
10.4	Certificate of calibration and inspection from factory.			

Bidder must completely fill the Technical Specification Form (TSF). Only Yes/no/all complies should not be written. Page number in the catalogue of all the required parameters must be clearly mentioned and highlighted. Failure in doing so may lead to rejection of bid from technical committee

बायोमेडिकल इन्जिनियर

3.Technical Specification of Digital Centrifuge

S.N.	Technical Specifications		Bidders Compliance Sheet		
	Digital Centrifuge		Yes/ No	Page no in Catalogue	Remarks
	Manufacturer				
	Brand				
	Model				
	Country of Origin				
1	Description of Function				
1.1	Compact centrifuge for quick and easy centrifugation of samples.				
2	System Configuration				
2.1	Microprocessor based control system.				
3	Technical Specification				
3.1	Max. RPM :	3500 -4500 RPM			
3.2	Max. capacity:	15ml x 12 tubes			
3.3	Digital Display:	Time, RPM, RCF, ACC, DEC, Proram,Start/Stop			
3.4	Timer:	0-99 Mins			
3.5	Shall have air cooling system				
3.6	Shall have AC Motor Drive system				
3.7	Shall have over speed protector, unbalance detector				
4	Accessories, spares and consumables				
4.1	All standard accessories, consumables and parts required to operate the equipment, including all standard tools and cleaning and lubrication materials, to be included in the offer. Bidders must specify the quantity of every item included in their offer (including items not specified above).				
5	Operating Environment				
5.1	The product offered shall be designed to be stored and to operate normally under the conditions of the purchaser's country. The conditions include Power Supply, Climate, Temperature, Humidity, etc.				
5.2	Power supply: 220-240V/ 50 Hz AC Single phase fitted with appropriate plug to meet purchaser's country requirements.				
6.	Standards and Safety Requirements				
6.1	Must submit ISO 13485:2016 for Medical Devices AND				
6.2	CE approved certificate.				
7.	User Training				
7.1	The Supplier shall conduct onsite user training for this				

बायोमेडिकल इंजिनियर

	equipment to enable operators to use the equipment properly. The training shall include the use of all operational functions of the equipment, as well as routine checks and maintenance expected by users.			
8.	**Warranty**			
8.1	Comprehensive warranty for 1 years after acceptance.			
8.2	During the warranty period supplier must ensure planned preventive maintenance (PPM) and corrective/breakdown maintenance whenever required.			
9.	**Maintenance Service During Warranty Period**			
9.1	During the warranty period supplier must ensure planned preventive maintenance (PPM) along with corrective/breakdown maintenance whenever required.			
10	**Installation and Commissioning**			
10.1	The bidder must arrange for the equipment to be installed and commissioned by certified or qualified personnel; any prerequisites for installation to be communicated to the purchaser in advance, in detail.			
11	**Documentation**			
11.1	User (Operating) manual in English.			
11.2	Service (Technical / Maintenance) manual in English.			
11.3	Certificate of calibration and inspection from factory.			

बायोमेडिकल इन्जिनियर