Equipment Specifications for FULLY AUTOMATED CLINICAL CHEMISTRY ANALYSER.

1 Description of Function	
1.1	For analysis of serum, plasma, urine, cerebrospinal fluid (CSF), hemolysate and whole blood for HbA1C.
2 Operational Requirements	
2.1	A discrete patient prioritized automated random access clinical chemistry analyzer,For chemistries, immunoglobulins, drug assay etc. in blood/urine/fluid with ISE electrolyte analyzer (Na+,K+,Cl,Ca Bicarbonate, Mg). Independent calibration of photometer and electrolyte analysts and an open reagent system.
3 Technical Specifications	
3.1	Analytical Mode:End point as well as Kinetic, Automatic ,discrete, Random Access
3.2	On board parameters :Minimum 25-30 parameters
3.3	Through put:Minimum 600 test/hour and ISE test (350-400 tests with). Continuous loading facility to be provided.
3.4	Sample Volume :Minimum 3 – 15 µl/test.
3.5	Reagent Volume:Maximum 150-300 micro litre for single reagent. Multi-reagent facility should be provided.
3.6	Error Check :Automatic flagging for errors
3.7	Auto dilution facility : For high value samples
3.8	Repeat Run facility :Facility to check the results by repeat run on the desired samples
3.9	Sample clot and Probe crash detection facility:For excluding erroneous analysis
3.10	Self diagnosis and trouble shooting:For minor day-to-day problem
3.11	Calibration & quality control :Linear/ Non-Linear/ Multipoint
3.12	Onboard Bar Code Facility:Bar Code ID for sample tube and Reagent Identification Facility
3.13	Reagent storage facility:Onboard refrigeration of 50 – 70 reagent bottles
3.14	Stat facility – refrigerated:Separate provision for Urgent Samples 8 – 12 preferred with refrigeration
3.15	LAN interface facility :Online data transmission facility through LAN to the Computer Network of the Hospital alongwith necessary software
3.16	Reagent system:Open system capable of working on reagent from any of the firms.
3.17	Measurement:Mono & Biochromatic with polychromatic correction for interfering substances.

3.18	Cuvette washing system:Inbuilt with automatic cuvette absorption measurement facility
3.19	Probe system:Separate probe for reagent and sample
3.20	OPTICAL SYSTEM: a)Light Source: Halogen/ Xenon Lamp. b)Wave Length Range:340 – 800 nm with polychromatic correction. c)Optical Detection:Diffraction gratting. d)O.D. Range : 0 – 2.5
3.21	Computer specification :CPU core i5, 2.7 GHz and above; 1 GB RAM;500 GB Hard Disk Drive; High Speed DVD/CD Rom 52 X: Serial and parallel ports ;Keyboard (lOS) , Mouse and Mouse Pad;Preloaded latest MS Windows Versions; SVGA Monitor size L5";lnkjet printer; Modem 56K;latest anti-virus SOLOMAN & NORTON.

4 System Configuration Accessories, spares and consumables

4.1	System as specified-
4.2	Deoiniser : With suitable water output capacity
4.3	Trial kits for various parameters, multi-calibrators and multicontrols.-01 set
4.4	ISE Electrodes for Na, K and Cl measurements-01 ea
4.5	Data Processor Computer with printer etc as specified above-01
4.6	All consumables required for installation and standardization of system to be given free of cost.

5 Environmental factors

5.1	Shall meet IEC-60601-1-2 :2001(Or Equivalent BIS) General Requirements of Safety for Electromagnetic Compatibility.or should comply with 89/366/EEC; EMC-directive.
5.2	The unit shall be capable of being stored continuously in ambient temperature of 0 - 50deg C and relative humidity of 15-90%
5.3	Thu unit shall be capable of operating in ambient temperature of 20-30 deg C and relative humidity of less than 70%
5.4	Complete installation of the system including water input and drainage system has to be installed

6 Power Supply

6.1	Power input to be 220-240VAC(Single Phase),/400-440 V (3 Phase)/ 50Hz as appropriate fitted with Indian plug
6.2	Voltage corrector/stabilizer of appropriate ratings meeting ISI Specifications.(Input 160-260 V and output 220-240 V and 50 Hz)
6.3	Suitable UPS with maintenance free batteries for minimum one-hour back-up should be supplied with the system.

7 Standards, Safety and Training	
7.1	Should be FDA , CE,UL or BIS approved product
7.2	Manufacturer/Supplier should have ISO certification for quality standards.
7.3	Comprehensive warranty for 3 years and 7 years Comprehensive AMC after warranty
7.4	Comprehensive training for lab staff and support services till familiarity with the system.
7.5	Attach original manufacturer's product catalogue and specification sheet. Photocopy/ computer print will not be accepted. All technical data to be supported with original product data sheet. Please quote page number on compliance sheet as well as on technical bid corresponding to technical specifications.
7.6	Should be compliant with IEC 61010-1:(or any international equivalent eg EN/UL 61010) covering safety requirements for electrical equipment for measurement control and laboratory use
8 Documentation	
8.1	User/Technical/Maintenance manuals to be supplied in English.
8.2	Certificate of calibration and inspection.
8.3	List of Equipments available for providing calibration and routine maintenance support as per manufacturer documentation in service / technical manual.
8.4	List of important spare parts and accessories with their part number and costing
8.5	Log book with instruction for daily , weekly, monthly and quarterly maintenance checklist. The job description of the hospital technician and company service engineer should be clearly spelt out
8.6	Performance report in the last 5 years from major hospitals should be enclosed.