Technical Specifications of 12 channel ECG Machine				
S.N.	**Technical Specification**	**Bidder's Proposed Specifications**	**Page no. in technical datasheet**	**Deviation (If any)**
	Manufacturer			
	Brand			
	Type / Model			
	Country of Origin			
1.0	**Description of Function**			
1.1	ECG Machine is primary equipment to record ECG Signal in various configurations. 12 channels with interpretation are required for recording and analysing the waveforms with special software.			
2.0	**Operational Requirements**			
2.1	The ECG Machine must be able to acquire all 12 Leads simultaneously and interpret them.			
3.0	**System Configuration**			
3.1	12 channel ECG machine with interpretation, rechargeable battery and other complete accessories.			
4.0	**Technical Specification**			
4.1	Must acquire simultaneous 12 lead ECG for both adult and paediatric patients			
4.2	Must have Real time Colour display of ECG waveforms with signal quality indication for each lead			
4.3	Must have Artifact, AC, and low and high pass frequency filters.			
4.4	Must have full screen preview of ECG report for quality assessment checks prior to print.			
4.5	Must have interpretation facility of the amplitudes, durations and morphologies of ECG waveforms and associated rhythm for adult and paediatric patients.			
4.6	Must have splash resistant alphanumeric Keyboard for patient data Entry			
4.7	Must have High resolution (200 dpix500dpi on 25 mm/sec speed) digital array A4 size printer using thermal sensitive paper.			
4.8	Must have report formats of 3x4; 6x2, Rhythm for up to 12 selected leads; 12 Lead Extended measurements.			
4.90	Must have battery capacity of at least 30 ECGs or 30 minutes of continuous rhythm recording on single charge.			
4.10	It shall have the coloured touchscreen measuring not less than 5 inches and shall be able to display ECG waveforms,battery status,patient name,patient ID,heart rate,etc			
4.11	It shall support USB and SD card for Storage on external portable memories.			
4.12	Multimode of ECG Storage capability on USB device and shall have internal storage memory of at least 150 ECG			
4.13	Shall have appropriately protected for operation during defibrillation.			
4.14	It shall be able to check on the quality of electrodes connection, audio visual alert on loss of signal			
4.15	It shall have colored waveform display for the quality of ECG waveform.			
4.16	It shall be provided with the Dedicatd standard cart trolley(recommended by the manufacturing company) with heavy and sturdy base fitted with Castors wheels with brakes.Basket shall be available for storage of leads,gels and so on.			
5.0	**Accessories, spares and consumables**			
5.1	**Accessories:**			
5.1.2	• Box of A4 recording paper, 100 sheets- 1 no.			
5.1.3	• Bottles of electrode gel, approximately 350ml- 1 nos.			
5.2	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).			
6.0	**Operating Environment**			
6.1	The product offered shall be designed to be installed and to operate normally under the conditions of the purchaser's site. The conditions include Power Supply, Climate, Temperature, Humidity, etc.			
6.2	It Should be operated by 220V -230V AC,50/60Hz with line regulation of ±10% fitted with appropriate plug and the wire must be atleast 3m long.			
7.0	**Certifications And Standards.**			
7.1	Must submit ISO13485:2003/AC:2007 for Medical Devices **AND**			
7.2	CE (93/42 EEC Directives) **AND** USFDA approved product certificate.			
7.3	Shall meet IEC-60601-1-2:2001 General Requirements of Safety for Electromagnetic Compatibility.			
7.4	Electrical safety conforms to standards for electrical safety IEC-60601-1 General Requirements and IEC-60601-2-25 Safety of Electrocardiograms.			
8.0	**User Training**			

8.1	The bidder must conduct user training for this 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.			
9.0	**Warranty**			
9.1	Comprehensive warranty for 1 year after acceptance.(Irrespective of no. of hours of operation)			
10.0	**Maintenance Service during and After Warranty Period**			
10.1	During warranty period supplier must ensure preventive maintenance and corrective/ breakdown maintenance whenever required.			
10.2	The bidder must submit the letter of commitment regarding the availability of spare parts and accessories for next 5 years at the time of bidding.			
11.0	**Installation and Commissioning**			
11.1	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.			
11.2	Must supply preassembled unit, ready to use.			
12.0	**Documentation**			
12.1	Bidder should provide user (Operating) manual in English(Hardcopy and CD).			
12.2	Bidder should provide Service (Technical / Maintenance) manual in English(Hardcopy and CD).			
12.3	List of important spare parts and accessories with their part number and costing.			
12.4	Bidder should provide certificate of calibration and inspection from the manufacturer during installation.			