High Commission of India

Colombo

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Tender Document for Supply of Medical Equipment to 200 bed ward complex, constructed by the Government of India, in Vavuniya General Hospital.

Terms and Conditions

High Commission of India, Colombo invites sealed quotations (Bid Reference: Col/DC/228/1/2015) under the two bid system (technical and financial) from eligible bidders for supply and Installation of Medical equipment to 200 bed ward complex, constructed by the Government of India, in Vavuniya General Hospital.

2. Interested bidders may purchase the Tender document from Project Officer (Development Cooperation), High Commission of India, 36-38, Galle Road, Colombo-03, between **23 May 2016** and **16 June 2016** against payment of SLR 2,000 per package (non-refundable) in cash or Demand Draft drawn in favour of High Commission of India, Colombo. These documents can also be seen from www.hcicolombo.org and www.eprocure.gov.in.

3. The technical bid (Original & Duplicate) and the financial bid (Original & Duplicate) documents should be sealed by the bidder in separate covers duly superscribed and these four sealed covers are to be put in a bigger cover which should also be sealed and duly superscribed and marked "**Tender for Supply of Medical Equipment to 200 bed ward complex, constructed by the Government of India, in Vavuniya General Hospital.** The technical bids will be opened in presence of authorized representatives of bidders **at 1530 hrs on 17 June 2016** in the High Commission of India, Colombo, Sri Lanka. Sealed quotations may be submitted under the two bid system (technical and financial) by manufacturers or authorized dealers/sales agents of items mentioned in **Annexure A** (as per listed specifications) based in Sri Lanka or India.

4. Bidders requiring any clarification on any issue of the Tender document may take up with the Technical Evaluation Committee (TEC) during the Pre-Bid meeting at **1500 Hrs on 02 June 2016** in the High Commission of India, 36-38, Galle Road, Colombo-03.

5. A certificate guaranteeing that adequate amount of spare parts will be available for **at least seven years** including warranty period may be provided along with the technical bid.

6. Bid may be submitted to **Project Officer (Development Cooperation), High Commission of India, 36-38, Galle Road, Colombo 3** on or before **1500 hrs on 17 June 2016** and acknowledgement obtained.

7. Bidders are required to bid for entire items in a package. Bidder who have not quoted for any item in a package will be disqualified.

8. **OPENING OF BIDS**: The sealed quotations (technical bids) will be opened in presence of authorized representatives of bidders at **1530 hrs on 17 June 2016** in the High Commission of India. After scrutiny of technical bids by the TEC, financial bids of only those bidders who qualify the technical evaluation will be opened at a time and date to be intimated later.

9. **EARNEST MONEY DEPOSIT (EMD)/Bid Security**: Technical bids should contain EMD (May please refer clause 13) in the form of a DD/Guarantee drawn in favour of High Commission of India, Colombo. Alternatively, a standard bid guarantee (format as in **Annexure D**) issued by a commercial bank approved by the Central Bank of Sri Lanka, in favour of the High Commission of India, Colombo of this amount may be provided. The Bid Guarantee of all unsuccessful bidders will be released after the tender is finalized. The Bid Guarantee should be valid for **a minimum period of 225 days** from the date of opening of tenders. **Earnest Money Deposit/ Bid Guarantee must be submitted with the technical bids (in the same envelope) otherwise the bid will be rejected.** Bidders are requested to intimate the concerned Bank Guarantee issuing authority to send a confirmation to the High Commission of India at dc.colombo@mea.gov.in with the following information

I. Date if issue
II. Bond number
III. Value
IV. To whom the bond is issued"

10. **Documents establishing goods conformity to tender specification.**

I. The bidder shall provide in its bid the required as well as the relevant documents like technical data, literature, drawings etc. to establish that the goods and services offered in the tender fully conform to the goods and services specified by the purchaser in the tender documents. For this purpose the bidder shall also provide a clause-by-clause commentary on the technical specifications and other technical details incorporated by the purchaser in the tender documents to establish technical responsiveness of the goods and services offered in its tender.
II. If a bidder furnishes wrong and/or misguiding data, statement(s) etc. about technical acceptability of the goods and services offered

by it, its tender will be liable to be ignored and rejected in addition to other remedies available to the purchaser in this regard.

11. **Minor Infirmity/Irregularity/Non-Conformity:** If during the preliminary examination, the TEC find any minor infirmity and/or irregularity and/or non-conformity in a tender, the High Commission of India may waive the same provided it does not constitute any material deviation and financial impact and, also, does not prejudice or affect the ranking order of the bidders. Wherever necessary, the purchaser will convey its observation on such 'minor' issues to the bidders asking them to respond by a specified date. If the bidder does not reply by the specified date or gives evasive reply without clarifying the point at issue in clear terms, that tender will be liable to be rejected.

12. **Alteration and Withdrawal of Tender**

i. Bids are not permitted to alter / modify after the bid submission.
ii. No bids should be withdrawn after the deadline for submission of tender and before expiry of the tender validity period. If a bidder withdraws the tender during this period, it will result in forfeiture of the earnest money furnished by the bidder in its tender.

13. **PACKAGES FOR BIDDING:** Bidders may bid for one or more of the following packages (Details in **Annexure A)**. The EMD payments may be made accordingly.

Package	**EMD in Sri Lankan Rupees**
One (Pipe Medical gas system)	160,000/-
Two (Therapeutic equipment)	428,000/-
Three (Infusion devices)	113,600/-
Four (Monitoring Equipment)	219,600/-
Five (Basic Ward-need Equipments)	73,000/-
Six (Operating theatre Equipment)	320,000/-
Seven(PBU Equipment**)**	65,000/-
Eight(ICU Equipment)	216,000/-
Nine (Lab Equipment**)**	56,000/-
Ten (Imagining & Diagnostic Equipment**)**	140,000/-
Eleven (Hospital	206,400/-

Furniture)	
Twelve (General Furniture)	10,000/-
Thirteen (General Equipment)	16,000/-

14. **VALIDITY AND CURRENCY OF BIDS:** All bids shall hold good for acceptance for a minimum period of **180 days** from the date of closing of tender. The price quoted in the Price Schedule Form (at **Annexure B**) should be in Sri Lankan Rupees written clearly in ink or typewritten. The total amount of the bid should be given in words as well as in figures.

15. **PRICE QUOTATIONS**: The price as quoted in the Price Schedule Form (**Annexure B**) should be as of point of delivery, Installation and Training. The price both exclusive and inclusive of all taxes, duties and levies etc must be quoted and the taxes, duties and levies etc. as applicable may be quoted separately. The VAT registration number should be indicated, if registered for VAT. If the bidder is not registered for payment of VAT, a certificate to that effect, obtained from the Commissioner General of Inland Revenue, should be annexed to the tender.

16. The bidder should provide the following:

With the Technical Bid:

(i) Self-attested photo-copy of registration of the company/firm/ proprietorship with the concerned Sri Lankan authorities.

(ii) Annual Report (where statutorily required to be filed), and Audited Financial Reports for the last 3 years.

(iii) Details of experience in the field of supplying similar items to Government or companies in Sri Lanka

(iv) Manufacturer's authorization letter authorizing the bidder to supply the goods.

(v) Documentary evidence to establish conformity of the goods to the technical specifications in the bidding documents along with the Technical Specification Form (**Annexure A**).

(vi) Documents and information as required in the Manufacturers Authorization Form (**Annexure C**)

(vii) Bidders should either be ISO 9001 certified Medical Equipment companies registered with the Ministry of Heath, Government of Sri Lanka or with relevant authorities of Government of India. A certified copy

of such registration should be submitted with the technical bid.

(viii) The bidder shall also furnish a list giving full particulars, including available sources and current prices of spare parts, special tools, etc., necessary for the proper and continuing functioning of the goods during the warranty period.

(ix) EMD as mentioned in clause 9 above

With the Financial Bid:

(i) Price quotation in the Price Schedule Forms (as in **Annexure B)**
(ii) The price should be quoted only in Sri Lankan Rupees.

17. Any alteration or deletions in the bid should be authenticated by the *full signature* of the bidder.

18. **WARRANTY*:*** The Supplier shall provide on-site standard warranty as given by the manufacturer or as stipulated in the specification or minimum of one year. In the event of any correction of defects or replacement of defective material during the warranty period, the warranty for the corrected/replaced material shall be extended to a further period as originally agreed. Suppliers shall ensure the availability of after sales service for a period of **at least seven years** including warranty period. The warranty period shall be **as specified in the technical specifications**. Supplier shall also carry sufficient inventories to assure ex-stock supply of consumables and spares in Sri Lanka. **All charges with regard to the supply of spare parts, labour, travel, per diem and accommodation to supplier's staff etc. shall be borne by the supplier during the period of warranty. No additional expenditure for services rendered during the above period will be paid.**

19. **PERFORMANCE GUARANTEE**: The successful bidders shall submit, within **fourteen** days after the award of tender, a Performance Guarantee provided by a commercial bank or an insurance agency approved by the Central Bank of Sri Lanka, of an amount equal to ten percent (10%) of the value of order, drawn in favour of the High Commission of India, Colombo for the due execution of the contract within the specified period. The Performance Guarantee should be valid for a period of **150 days** from the date of award. If the Performance Guarantee is not submitted within **14 days** of the letter of award, the award will be cancelled and the Guarantee will be forfeited. The EMD of the bidder, whose tender is accepted, will be discharged when the said bidder's Performance Guarantee has been accepted. Bidders are requested to intimate the concerned Bank Guarantee issuing authority to send a confirmation to the High Commission of India at dc.colombo@mea.gov.in with the following information

I. Date if issue
II. Bond number
III. Value
IV. To whom the bond is issued"

20. **DELIVERY: The successful bidder must complete delivery, as stipulated above, of the items <u>within a period of 90 days</u> from the issue of Purchase Order.** Payment will be done only after successful supply and installation of equipment at Vavuniya General hospital. Breakage, if any, in transit during the supply period shall be the responsibility of the supplier and should be replaced free of cost. If the successful bidder fails to hand over within the stipulated period, liquidated damages @ 0.5% of the tender amount shall be levied for a delay of each calendar week or part thereof, subject to a maximum of 10%.

21. **MODE OF PAYMENT**: Payments will be released only after the items as tendered are handed over/delivered and installed at Vavuniya General Hospital, Sri Lanka in perfect working condition and physical verification of the supplies, as also technical verification has been carried out by a competent team authorized by the Government of Sri Lanka/ High Commission of India. Upon completion of delivery, the items will be inspected and defect, shortcomings or non-conformity to specifications, if any, will be brought to the notice of the Bidder who should take immediate action to rectify those **within 14 days**.

22. **RETENTION MONEY:** Retention money to the extent of 5% of the invoice amount will be retained up to the warranty period.

23. Any dispute or difference regarding the interpretation of the provisions of the Agreement/Contract shall be resolved amicably between the parties. If the dispute is not resolved through mutual consultations within a period of six months, either party may refer the dispute to arbitration in accordance with the Arbitration & Conciliation Act 1996 of India as amended from time to time. The number of arbitrators shall be one and that the place of arbitration shall be New Delhi, India. In such a situation the applicable law will be the law of India. The language of the Tribunal shall be English. The cost shall be borne by the parties equally unless otherwise determined by the Arbitral Tribunal.

24. **ACCEPTANCE OF TENDERS:** The High Commission of India reserves the right to accept or reject any or all of the tenders in full or in part of the bid without assigning any reasons or incurring any liability thereof.

Annexure A : Specification for Supplies

Annexure A : Specification for Supplies

Package ONE : Supply and Installation of Pipe Medical gas system

Nr	Equipment and Instrument	Specification	The most appropriate answer	Required Number
1	Wall Oxygen System	Expansion of the available piped medical gas system 1. Thirty two Oxygen outlets, eight suction outlets and four air outlets. 2. Three pressure changeovers. 3. Three zone valves. 4. Necessary lockable valves. pipes and consumables. 5. Two years warranty.		1

Package Two : Supply and Installation of Therapeutic equipments

Nr	Equipment and Instrument	Specification	The most appropriate answer	Required Number
1	Portable ventilator	1. The unit should operate on both battery power for at least 10 hours and 230 V AC, 50 Hz. 2. The unit should be designed to be used with Oxygen gas cylinders and it should be possible to deliver 100% Oxygen to the patient. 3. Suitably designed for Ambulance and inter-hospital use. 4. Operating modes shall be CMV, SIMV, CPAP with Pressure Support Ventilation. - Volume controlled - Pressure controlled - CMV - SIMV - Spontaneous and CPAP - Nebulizer (ultrasonic with one reusable chamber) 5. The equipment should have following minimal parameters for user settings: - Tidal Volume 50-2200 mL - I:E Ratio 1:99 -3:1 - Respiratory Rate 1-99 BPM - PEEP 0 – 30 cmH2O - Patient Trigger: Flow or Pressure - Oxygen concentration 21 – 100% - Airway pressure: 5 - 60 cmH2O - Slope rise 1 to 10 6. Transport ventilator should be supplied with the followings: - Oxygen gas supply hose and regulator		2

		⁾ Adult reusable patient circuits 05 nos. ⁾ Paediatric reusable patient circuits 05 nos. ⁾ Test lung ⁾ Bacteria Filter 50 Nos. ⁾ Oxygen Sensor 03 Nos. 7. Shall have following alarms: ⁾ High/Low pressure ⁾ High/Low breath rate ⁾ High/Low Oxygen % ⁾ Low battery 8. Each machine must carry a full two years comprehensive warranty. 9. Ventilator should be equipped with a dual heated servo-controlled humidifier system with adult and paediatric humidifier chambers and accessories. 10. You must address specifically & individually the specifications given above by providing printed, illustrated technical literature to substantiate conformity with the same.		
2	Defibrillator with Pacer	1. The equipment shall he suitable for use on both AC mains 230 V +/- 10% and internally rechargeable battery. The internal battery should be able to deliver at least 90 discharges at 360J energy level. 2. The unit shall consist of I. Defibrillator II. ECG-Monitor III. Built in Recorder 3. Defibrillator — shall have the following features: 3.1 Discharge waveform Type: Biphasic 3.2 Output Energy: 2J to 360J-accuracy 10% or better. 3.3 Charging Time: 10 Seconds or less, to (360J) Maximum Energy level. 3.4 Facility for Manual and Automatic External Defibrillation (AED).		6

		3.5 Quick recovery of ECG Wave form (3 seconds or better) 3.6 Digital display of energy set and energy delivered. 3.7 Facility for monitoring at least 120 minutes and delivering at least 90 shocks of 360J on fully charged battery 3.8 Battery low-level indication. 3.9 Should be supplied with external paddles for both adult and pediatric use. 3.10 A minimum number of dedicated hard keys to operate for quick defibrillation in emergencies. 3.11 ECG derivation via paddles and ECG cable (3/5 lead) 3.12 Defibrillator self-testing facility 3.13 Standard Pacing facility 3.14 Pacing pads - 10 sets should be provided. 4. ECG Monitor 4.1 The monitor screen shall be of color LCD type at least 14 cm diagonally. 4.2 It shall he possible to select and display lead I, II and III ECG waveforms. Display sweep speed : 25mm/ sec 4.3 Shall incorporate ESU noise filtering and defibrillator discharge protection. 4.4 Shall have a heart rate display range from 20 to 350 bpm, with pre-settable high and low alarm settings. 5. Printer 5.1 Shall operate manually and also automatically. 5.2 Shall automatically print out defibrillator data on each defibrillation performed. 6. The unit shall be supplied with a 3-pin hospital grade plug top. 7. The equipment shall have a patient leakage current of less than 10 micro Amps and chassis leakage current of less than 100 micro Amps. 8. All the consumables and accessories (including 20 additional		

		recording paper packs) shall be supplied with each unit. 9. One set of detailed operational and service manuals must be supplied 10. The machine shall carry a two years warranty on “fu1l parts and labour“ basis. 11. Please mention all the international quality and safety standards met by the product.		
3	Portable paediatric ventilator	1 Light weight transport ventilator for paediatric therapeutic application and operating on 12 V DC battery (adaptor to be provided) and on an internally rechargeable sealed battery of at least 10 hours capacity. It should be able to use without external compressed air or without O_2 supply in case of O_2 failure 2 **Ventilation Modes:** [a] Volume controlled [b] Pressure controlled [c] CMV [d] SIMV [e] Spontaneous and CPAP [f] Nebulizer (ultrasonic with one reusable chamber) 3 **Controlled parameters:** [a] Tidal Volume 50-2200 mL [b] I:E Ratio 1:99 -3:1 [c] Respiratory Rate 1-99 BPM [d] PEEP 0 – 30 cmH_2O [e] Patient Trigger: Flow or Pressure [f] Oxygen concentration 21 – 100% [g] Airway pressure: 5 - 60 cmH_2O		1

				[e] Slope rise 1 to 10		
			4	**Monitored & Displayed Parameters**		
				[a] Airway pressure		
				[b] Expired/inspired tidal volume		
				[c] Oxygen concentration		
				[d] Internal battery status		
			5	**Alarm facilities**		
				[a] High/low air way pressure		
				[b] Apnea		
				[c] Oxygen failure		
				[d] Battery low		
				[e] Equipment malfunction		
			6	**General Requirements**		
				[a] Accessories to be provided with each machine		
				2x neonatal, 2x paediatric patient circuit (autoclavable & reusable) 1x neonatal test lung, 1x peadiatric test lung		
				[b] One set of complete service & operational manuals		
				[c] 2 years comprehensive warranty		
4	Ventilator	1. The unit should operate on both battery power for at least 10 hours and 230 V AC, 50 Hz. 2. The unit should be designed to be used with Oxygen gas cylinders and it should be possible to deliver 100% Oxygen to the patient. 3. Suitably designed for Ambulance and inter-hospital use. 4. Operating modes shall be CMV, SIMV, CPAP with Pressure Support Ventilation.) Volume controlled				3

		⁾ Pressure controlled ⁾ CMV ⁾ SIMV ⁾ Spontaneous and CPAP ⁾ Nebulizer (ultrasonic with one reusable chamber) 5. The equipment should have following minimal parameters for user settings: ⁾ Tidal Volume 50-2200 mL ⁾ I:E Ratio 1:99 -3:1 ⁾ Respiratory Rate 1-99 BPM ⁾ PEEP 0 – 30 cmH2O ⁾ Patient Trigger: Flow or Pressure ⁾ Oxygen concentration 21 – 100% ⁾ Airway pressure: 5 - 60 cmH2O ⁾ Slope rise 1 to 10 6. Transport ventilator should be supplied with the followings: ⁾ Oxygen gas supply hose and regulator ⁾ Adult reusable patient circuits 05 nos. ⁾ Paediatric reusable patient circuits 05 nos. ⁾ Test lung ⁾ Bacteria Filter 50 Nos. ⁾ Oxygen Sensor 03 Nos. 7. Shall have following alarms: ⁾ High/Low pressure ⁾ High/Low breath rate ⁾ High/Low Oxygen % ⁾ Low battery 8. Each machine must carry a full two years comprehensive		

		warranty. 9. Ventilator should be equipped with a dual heated servo-controlled humidifier system with adult and paediatric humidifier chambers and accessories. 10. You must address specifically & individually the specifications given above by providing printed, illustrated technical literature to substantiate conformity with the same.		

Package Three : Supply of Infusion devices

Nr	Equipment and Instrument	Specification	The most appropriate answer	Required Number
1	Syringe pump	1. The unit shall operate on mains supply of 230V ⨍10%, 50 Hz and shall be operated with at least four hours built-in rechargeable battery pack in case of main power supply is interrupted. 2. It shall be able to use any standard syringe set with the capacity of 20-50 ml for accurate solution delivery. 3. The machine should be able to deliver 0.1 to 1200 ml/hour. 4. There shall be a digital display of rate of discharge, total volume delivered. 5. Provision for “fast-flow” or “purging” while operating or while on a specific flow. 6. Maximum rate of flow in 20 ml syringe not less than 400 ml/hour. 7. Maximum rate of flow in 50 ml syringe not less than 1200 ml/hour. 8. The unit shall be incorporated visual and audible alarm facility to indicate Nearly empty, Occlusion, syringe disengaged, plunger / clutch disengaged and Low battery condition. 9. Detailed installation, service and user manuals in English shall be supplied together with the equipment. 10. Fully graphic, illustrated original technical literature in English describing the equipment offered & detailing the specifications shall also be supplied with the offer. 11. The main unit and accessories must be covered by a comprehensive “parts & labour” warranty for a period of at least 24 months from the date of delivery.		24
2	Infusion pump	1. The unit shall operate on mains supply of 230V ⨍10%, 50 Hz and shall		18

		be operated with at least two hours built-in rechargeable battery pack in case of main power supply is interrupted. 2. The unit shall be incorporated with a suitable pump and feedback to control infusion precisely at constant drop rate. 3. It shall be able to use any intra venous giving set (I.V. set) for solution delivery accurately. 4. The delivery rate of the unit shall be adjustable in the range of 1-100 drops/min in 1 drop/min steps with ±10% accuracy. The total volume to be infused shall be adjustable in the range of 0-4000 ml . 5. The unit shall display current delivery rate, number of drops to be delivered and total drop delivered digitally. 6. The unit shall be incorporated visual and audible alarm facility to indicate infusion complete, air-in-line, door open, occlusion of infusion line and low battery condition. 7. Detailed installation, service and user manuals in English shall be supplied together with the equipment. 8. Fully graphic, illustrated original technical literature in English describing the equipment offered & detailing the specifications shall also be supplied with the offer. 9. The main unit and accessories must be covered by a comprehensive “parts & labour” warranty for a period of at least 24 months from the date of delivery.		

Package Four : Supply and installation of Monitoring Equipments

Nr	Equipment and Instrument	Specification	The most appropriate answer	Required Number
1	Multipara Monitor Basic	1) Operating voltage shall be 230V (+/-10%), 50Hz AC mains with built-in rechargeable maintenance free batteries for continuous operation of the unit at least for a period of 3 hours in case of a power failure. 2) Monitor shall have configuration setting to adjust for adult, neonatal, or pediatric patient applications. All monitoring measurement algorithms and alarm settings shall be changed in accordance with the setting. 3) All input connectors shall be color/key coded to avoid incorrect connections. 4) Monitor shall simultaneously display the real time waveforms, numerical data and graph trends. 5) All bedside Monitor shall have provision to monitor, process and display following parameters in different colors. a. ECG/Respiration with HR b. NIBP (Range: 25 to 250 mmHg & accuracy +/-5mmHg) c. Pulse oxymetry capable of performing accurately under motion and low perfusion conditions. (Range: 0 to 100% & accuracy +/- 2 digits) 6) **All relevant accessories** to monitor above parameters in adult, pediatric and neonate modes shall be provided. 7) Display should have the capability to display at least 6 traces including ECG, SPO_2, and Respiration. 8) Display should be of high- resolution active TFT with a minimum size of at least 10 inch and shall have a bright screen easily viewable even at a distant from different angles under all lighting		18

		conditions. 9) Trend graphing and listing of all monitored parameters shall be possible up to 24 hours. 10) The unit shall be incorporated visual and audible alarm facility for all important parameters. All alarm indicators should be graded, prioritized and color-coded according to their severity. 11) Monitor should be compact with all patient connections on one side of the monitor for better cable management 12) The system must be covered by a comprehensive parts & labour warranty for a period of at least 24 months from the date of final acceptance. 13) All the accessories shall be warranted for at least 2 years. 14) The same model equipment quoted in your offer should have been supplied to any Government hospitals in the past and successfully used at least for 3 years without any complaints about the accuracy or any other problems. If there are any complaints about the machine, the offer will be considered as technically non-responsive. 15) The past history of the bidder in service and maintenance will be taken into account for the evaluation. If there are any complaints in timely attending the repair or rectifying the problem correctly, the bidder will be disqualified. 16) One set of detailed operational and service manuals must be supplied. 17) A statement of compliance to every clause and sub clause of this document must be supplied with the bid.		
2	Multipara Monitor Advanced	18) Operating voltage shall be 230V (+/-10%), 50Hz AC mains with built in power supply and rechargeable maintenance free batteries for at least 2 hours. 19) Monitor shall have configuration setting to adjust for adult, neonatal, or pediatric patient applications. All monitoring		6

		measurement algorithms and alarm settings shall be changed in accordance with the setting. 20) All input connectors shall be color/key coded to avoid incorrect connections. 21) Monitor shall simultaneously display the real time waveforms, numerical data and graph trends. 22) All bedside Monitor shall have provision to monitor, process and display following parameters in different colors. a. ECG/Respiration with HR b. NIBP (Range: 25 to 250 mmHg & accuracy +/-5mmHg) c. Pulse oxymetry capable of performing accurately under motion and low perfusion conditions. (range: 0 to 100% & accuracy +/- 2 digits) d. Capnography - main stream with necessary accessories. e. One temperature channel 23) All relevant accessories to monitor above parameters in adult, pediatric and neonatal modes shall be provided. 24) Display should have the capability to display at least 6 traces including ECG, SPO_2, respiration, and CO_2. 25) Display should be of high- resolution active TFT with a minimum size of at least 12 inch and shall have a bright screen easily viewable even at a distant from different angles under all lighting conditions. 26) Trend graphing and listing of all monitored parameters shall be possible up to 24 hours. 27) ECG monitoring should be available with continuous ST segment analysis and arrhythmia analysis of different types. 28) The unit shall be incorporated visual and audible alarm facility for all important parameters. All alarm indicators should be graded, prioritized and color-coded according to their severity. 29) Monitor should be compact with all patient connections on one		

		side of the monitor for better cable management. 30) There should be display management feature that allow automatic spacing of waveforms according to the number of parameters monitored. **GENERAL** 1. The system must be covered by a comprehensive parts & labour warranty for a period of at least 2 years from the date of final acceptance. 2. All the accessories shall be warranted for at least 2 years. 3. The system must be user friendly with dedicated keys for most frequently used functions. 4. One set of detailed operational and service manuals must be supplied. 5. The supplier must undertake to install and commission the system and train the users by an application specialist without any additional cost. 6. A statement of compliance to every clause and sub clause of this document must be supplied with the bid.		
3	Pulse oxymeter	1. The unit shall be suitable for the monitoring of saturated oxygen and pulse rate and suitable for use in the hospital without any interference from any other equipment. 1. The unit shall operate on a power supply of 230V $\pm$ 10%, 50Hz. It shall also be provided with re-chargeable battery back up at least for 6 hrs and there shall be an indicator for operation of battery. 2. The saturation oxygen measuring range (SaO_2) shall be variable in the range of 60% - 100% with an accuracy of at least $\pm$2.5%. 3. The pulse rate shall be variable in the range 40-200 beats/min with an accuracy of at least $\pm$2bpm.. 4. There shall be independently controllable high and low audible alarm		5

		facilities, settable in the following ranges with provision muting: High SaO_2 :- 85- 100% Low SaO_2 :- 60 - 95% 5. It shall be possible to control the display of the followings: a. Pulse waveform b. Saturation oxygen c. Pulse rate d. Trend for 60 minutes 6. It shall be possible to clearly distinguish between numerical values for pulse rate and saturation oxygen and the waveforms should be clearly visible from any direction. 7. Two reusable suitable probes (one each for adult and paediatric use) shall be provided with each unit. 8. All standard accessories necessary to successfully operate the unit shall be included with the offer. 9. A complete and detailed set of operation, service and maintenance literature in English must be supplied with each unit. 10. The equipment supplied shall be a comprehensive “Parts & Labour” replacement warranty for a period of at least 24 months and 24 months warranty for the probes from the date of delivery. 11. Fully graphic, illustrated original technical literature in English describing the equipment offered & detailing the specifications shall also be supplied with the offer.		

Package Five : Supply and installation of basic Ward-need Equipments

Nr	Equipment and Instrument	Specification	The most appropriate answer	Required Number
1	Portable sucker	1. The sucker shall be able to operate on mains supply, 12 V external battery and rechargeable internal battery for at least 1 hour. 2. A battery indicator should be available to show the battery level. 3. This should be in small size and light weight for mobile purposes. 4. The maximum negative pressure shall be greater than 600 mmHg. 5. The indication range of negative pressure meter shall be 0 – 760 mmHg. 6. The suction bottle capacity shall be 1000 L. 7. The jar shall have an effective over flow preventive device. 8. Twenty nos. of bacteria filters should be supplied with each unit. 9. Detailed installation, service, and user manuals in English shall be supplied together with the equipment. 10. The equipment shall be warranted for a period of not less then 24 calendar months from the date of successful commissioning on full “parts & labour” basis.		2
2	Sucker(double Jar)	1. The unit shall function on mains supply of230V±10%, 50Hz. 2. The unit shall be floor standing & mobile on anti – static castors& suitable for continuous operation. The body of the unit shall be constructed of a corrosion resistant material, strong & suitable for rugged use. 3. The suction jars shall be made of polyurethane with a capacity of 2 liters & graduated in milliliters with a change over handle. 4. The jar shall have an effective over flow preventive device. 5. A bacterial filter facility shall be incorporated. 6. The pump shall be of piston or rotary type & designed for convenient maintenance.		2

		7. The maximum vacuum pressure shall not be less than 700mmHg & the flow rate not less than 50 liters/min 8. A main ON/OFF switch, indicator lamp & vacuum gauge shall be incorporated in the unit together with a vacuum control value. 9. The motor shall have an overload protection device. 10. Detailed installation, service and user manuals in English shall be supplied together with the equipment. 11. The equipment shall be warranted for a period of not less then 24calendar months form the date of successful commissioning on full "parts & Labour" basis. Such a warranty shall include servicing and preventive maintenance during this period.		
3	ECG recorder	01. The unit shall be portable single channel electrocardiograph functioning on the standard limp and chest lead configurations suitable for operation on main power supply of 230V ± 10%, 50Hz and on a rechargeable battery and suitable for working in a tropical climate. 02. Printing method: thermal head 03. Minimum selectable sensitivity from 2.5, 5, or 10 and mm/mV in auto mode, 2.5, 5, 10 or 20 mm/mV in manual mode. 04. Time constant should be approximately 3.2 second. 05. Frequency response 0.05 to 100 Hz (with in -3dB) 06. Common Mode Rejection Ratio should be over 100dB 07. Patient circuit leakage current should be less than 10 microampere. 08. There should be a standardization voltage signal of 1 mV 09. There should be a selectable paper travel speed of 5, 25, or 50 mm/sec. 10. Filter facility for hum and EMG. 11. In addition to standard accessories the following accessories should be provided with the machine. i. Patient cable - 01 Nos		6

		ii. Clip electrode - 04 Nos iii. Chest electrode - 06 Nos. v. Recording paper rolls - 25 Nos 12. Service and operational manuals should be provided in English. 13. The equipment shall be warranted for a period of not less than 24 calendar months from the date of delivery on full "parts and labour" replacement basis. Such a warranty shall also include servicing and preventive and corrective maintenance free of charge during the warranty period. 14). The equipment should have a very good history in usage and the after sales service of the company should be very good. 15). A copy of CDDA registration should be attached.		
4	Mini Auto clave	01. The unit shall operate on a power supply of 230 V ± 10%, 50 Hz. 02. It shall be able to sterilize instruments, utensils and other items used for surgical purposes. 03. The unit shall be able to operate automatically at the temperatures 134 ^{0}C and 121 ^{0}C by using a selector switch. 04. There shall be a facility of drying the chamber after sterilizing. 05. The maximum operating pressure shall not be more than 2.6 bar. 06. The chamber volume shall not be less than 24 litres. 07. The following safety devices shall be incorporated with the unit. Over pressure control Over heat control Door interlock 08. There shall be a displaying facility for chamber pressure and temperature. 09. There shall be an alarming system for high/low pressure, high/low temperature and low water. 10. The following accessories shall be provided with the equipment. Trays Pouch rack		6

		Tray lifter 11. Detailed installation, service and operation manuals in English shall be supplied together with the equipment. 12. Fully graphic, illustrated original technical literature in ENGLISH describing the equipment offered & detailing the specifications shall also be supplied with the offer. 13. The equipment supplied must be covered by a comprehensive “parts & labour” warranty for a period of at least 24 months from the date of delivery.		

Package Six : Supply and installation of OT Equipments

Nr	Equipment and Instrument	Specification	The most appropriate answer	Required Number
1	Diathermy	1. The unit shall function on power supply of 230V ± 10%, 50 Hz. It shall be solid state, ruggedly constructed unit having monopolar and bipolar functions and shall be of portable type. 2. It shall be a high power electrosurgery unit of monopolar cutting, coagulation and blending with maximum output powers not less than 350W. 3. Bipolar cutting application should be available and required hand piece should be supplied with the unit. 4. The output power frequency shall not be less than 500 kHz and the maximum leakage current shall not exceed 10 micro Amperes for all patient circuits. 5. The unit shall incorporate safety circuits to protect operators as well as patients from burning and electric shock. 6. The output power in all conditions shall be able to be varied (control) from zero to maximum continuously. 7. The power ON/OFF switch shall incorporate an indicator lamp. It shall be able to switch the output power by means of both foot switch and finger switch. 8. There shall be visual indicators indicating different operating modes. 9. The unit shall be equipped with audible and visual alarms to indicate equipment malfunction, such as discontinuations of patient plate etc. 10. The unit shall be designed for safe operation in the presence of anaesthetic gases. 11. The diathermy shall be supplied with the following accessories: (a) Reusable neutral electrode 03 nos. (b) Monopolar lead with needle 03 nos.		3

		(c) Bipolar lead and forceps 02 nos. (d) Bipolar cutting instrument 02 nos (e) Monopolar foot switch, bipolar foot switch 12. The unit prices of the above accessories shall also be quoted separately. 13. A complete and detailed set of operation, service and maintenance manuals in English must be supplied with each unit. 14. Fully graphic, illustrated original technical literature in ENGLISH describing the equipment offered & detailing the specifications shall also be supplied with the offer. 15. The equipment supplied must be covered by a comprehensive "parts & labour" warranty for a period of at least 24 months from the date of delivery.		
2	Anaesthesis Machine	**B. ANAESTHETIC MACHINE** 01. The main framework of the machine & the working surface shall be of stainless steel and have dimensions of not less than 27" x 19" and the unit shall be mounted on swivel type anti-static lockable caster wheels. 02. The unit shall incorporate drawer units and monitoring shelf. 03. The unit shall have provision for piped line supply of O_2 (Oxygen), N_2O(Nitrous Oxide) & Air with which should include colour coded anti-static hoses with connections to fit the gas outlets conforming to British Standards. 04. The machine shall be suitable for supplying O_2 and N_2O from medical gas cylinders through flush type pin index yokes. 05. The machine shall be fitted with following attachments: a) Pin index yokes, two each for O_2 and N_2O cylinders with pressure regulators and pressure gauges b) Flow meters for O_2, N_2O & Air with O_2 on the left hand side and maximum flow rates not less than 10 l/min c) Proportionate system for O_2 and N_2O d) Emergency O_2 flush e) Auxiliary O_2 outlet at 4 bar f) Isoflurane vaporiser and Sevoflurane vaporiser		2

		06. The following safety devices shall be incorporated with the unit: a) Anti-Hypoxic device for O_2 and N_2O b) Audible O_2 supply failure alarm system, which cut off other gases and open valve to atmosphere c) Adjustable pressure relief device (0 - 60 cm H_2O) d) N_2O / Air interlock e) Vaporiser interlock 07. The following circuits and accessories shall be supplied with each unit indicating their unit prices separately: a) Magill type breathing circuit consisting of T adapter with bag mount, 2 litre reservoir bag, corrugated tube (42”), male & female adapters, magill valve and mount adapter. b) Bain circuit with Bain valve c) Circle absorber system complete with 2 kg capacity canister for soda lime with mounting facility, scavenging valve and absorber bypass feature, detachable reusable fresh gas hose assembly including 2 litre bag and patient breathing circuit including face masks with hooks for head harnesses and 2 spill valves one at patient end and one at the absorber end. d) Anatomical type face masks (sizes 1-5) with hooks for head harness. e) Head Harness (02 nos.) f) Aneroid sphygmomanometers with inflator fitted g) Tool set inclusive of adjustable spanner for cylinders. h) 2 nos. catheter mounts 08. All gas outlets, circuit connections shall be compatible with BS standards. 09. The tenderer should quote separately for all the fast moving accessories, disposables and spare parts. 6. Detailed installation, service and operation manuals in English shall be supplied together with the equipment. 7. Fully graphic, illustrated original technical literature in English describing the equipment offered & detailing the specifications shall also be supplied with the offer.		

8. The equipment supplied must be covered by a comprehensive “parts & labour” warranty for a period of at least 24 months from the date of delivery.

B. ANAESTHETIC VENTILATOR

1. The unit shall operate on a power supply of 230V ±10%, 50 Hz.
2. The unit shall be compact and able to mount on a mobile stand so that the unit will be at eye level. The unit shall include a mobile stand for this purpose.
3. It shall be possible to operate the ventilator on following modes:
   a) Volume controlled
   b) Pressure controlled
3. The bellows shall be driven by an electrically powered motor or pneumatically operated.
4. There shall be an internal battery system for continuous operation of the unit at least for a period of 1 hour in case of a power failure.
5. The equipment shall have the controls and displaying facilities for the followings.
   a) Tidal Volume : 50 - 1000 ml
   b) Respiratory Frequency : 6 - 40 cycles/min.
   c) I: E Ratio : 1 : 4 - 4 : 1 or insp. & exp. times independently adjustable
   d) Airway Pressure : 0 - 100 cm H_2O

   Tidal Volume and Respiratory Frequency shall be independently controllable.
6. There shall be an illuminated pressure gauge to indicate circuit pressure.
7. There shall be a safety mechanism for limiting high and low pressures.
8. There shall be audible and visual alarm facility for indicating high/low pressure and power failure.
9. The unit shall have facilities for use as a bag squeezer for closed circuits via hose with standard accessories.
10. All gas outlets, circuit connections shall be compatible with BS standards.
11. The tenderer should quote separately for all the fast moving accessories, disposables and spare parts.
12. Detailed installation, service and user manuals in English shall be supplied together with

<table>
<tr><td></td><td></td><td colspan="2">the equipment.
13. Fully graphic, illustrated original technical literature in English describing the equipment offered & detailing the specifications shall also be supplied with the offer.
14. The equipment supplied must be covered by a comprehensive “parts & labour” warranty for a period of at least 24 months from the date of delivery.</td><td></td><td></td></tr>
<tr><td>3</td><td>OT Lamp</td><td>1</td><td>The lamp shall operate on a power supply of 230V+/- 10%, 50Hz and a suitable online UPS should be provided which can work for 30 minutes.</td><td></td><td>2</td></tr>
<tr><td></td><td></td><td>2</td><td>It shall be a suspended ceiling mounted system, property counter balance suitable for use in major operating theatres and shall have a proper locking system</td><td></td><td></td></tr>
<tr><td></td><td></td><td>3</td><td>The unit shall comprise of a main lamp and a satellite</td><td></td><td></td></tr>
<tr><td></td><td></td><td>4</td><td>The stem of the main lamp shall be able to adjust to facilitate the installation and shall have the following specifications.
Illuminance at one meter away - not less than 150,000 lux
Field diameter - 200 to 300mm</td><td></td><td></td></tr>
<tr><td></td><td></td><td>5</td><td>Satellite lamp shall be attached to the same structure as the main lamp and shall have the following specifications
Illuminance at one meter away - not less than 100,000 lux
Field diameter - 175 to 250 mm</td><td></td><td></td></tr>
<tr><td></td><td></td><td>6</td><td>The bulb type shall be LED</td><td></td><td></td></tr>
<tr><td></td><td></td><td>7</td><td>The light shall be heat and shadow free</td><td></td><td></td></tr>
<tr><td></td><td></td><td>8</td><td>The colour temperature of the light shall be at 4500K ± 200K</td><td></td><td></td></tr>
<tr><td></td><td></td><td>10</td><td>The temperature rise shall not be greater than 1ºC above the ambient.</td><td></td><td></td></tr>
<tr><td></td><td></td><td>11</td><td>Detailed installation, service and user manuals in English shall be supplied together with the equipment.</td><td></td><td></td></tr>
<tr><td></td><td></td><td>12</td><td>Life time of the bulbs shall not be less than 25,000hrs.</td><td></td><td></td></tr>
<tr><td></td><td></td><td>13</td><td>The focusing of the system shall be done by a removable sterilizable handle and two extra handles shall be supplied with the unit.</td><td></td><td></td></tr>
</table>

			14	Fully graphic, Illustrated original technical literature in English describing the equipment offered & detailing the specifications shall also be supplied with the offer.		
			15	The equipment supplied must be covered by a comprehensive “parts and labour” warranty for a period of at least 24 months from the date of delivery.		

Package Seven : Supply and installation of PBU Equipment

Nr	Equipment and Instrument	Specification	The most appropriate answer	Required Number
1	Incubator-infant	1. Operating voltage shall be AC Mains 230v+/-10% at 50HZ 2. Both skin mode and air mode temperature control shall be available 3. Air mode temperature shall be controllable between 28 degrees centigrade in 0.1 degree steps, and skin mode temperature between 34 degree to 37 degrees centigrade 4. The infant indicated temperature shall be accurate within +/-0.3 degrees of the calibrated standard. 5. Automatic calibration check during unit start up and operation shall be available in the unit. 6. High temperature thermostat shall be provided to activate an alarm and to turn off the heater beyond 38 degrees centigrade. 7. Air and skin temperature shall sensed and displayed digitally. 8. The relative humidity shall be servo controlled & adjustable between 40 to 90% approximately 9. The unit shall be fitted with a front/side loading water reservoir. 10. There shall be a bright and easy to read display of patient, air & control temperature and relative humidity & heating power. 11. There shall be an alarm panel indicating the reason for alarm sounded. 12. Audiblc and visual alarm shall be activated under following conditions.		2

		a) Air flow failure b) Power failure c) Sensor failure d) High/low air temperature e) High/low skin temperature f) System failure 13. The mattress holder shall be tiltable (o±12º approximately) and be of 67x36 cm approximately in size 14. The Incubator shall have an acrylic double wall hood or a single wall polycarbonate hood to minimize radiant heat loss and maintain thermal integrity. 15. There shall be four large oval shape touch port doors and two iris ports. 16. An X ray cassette tray shall be available in the incubator. 17. The cabinet shall be pedestal type and movable on universal castors fitted with brakes and be made of steel with drawer units on both sides to store standard accessories. There shall be sufficient floor clearance to insert the base of a phototherapy unit 18. Mechanical construction of the canopy including drop down panels, doors, hinges and locks shall be strong and sturdy		
2	Phototherapy unit	**Technical Specifications of Phototherapy Unit (LED)** 1. The unit shall function on power supply of 230V⎩10%, 50 Hz. 2. The device should have a stable base with antistatic castors. At		1

		least two castors must have brakes. 3. The device should have height adjustment between 1.20 to 1.60 m 4. The device should have a continuous tilt up to 90 deg for use alongside infant warmers 5. The device should have a blue LED light source with a wavelength band of 450nm – 470 nm. 6. The device should have minimum 2 modes for a high level and low level setting. 7. The device should deliver a minimum irradiance of 30uW/cm2/nm and a maximum up to 55uW/cm2/nm. 8. The device should have a minimum effective treatment surface area of 1500 cm2 to adequately cover the babies. 9. The light source should have a high life preferably minimum of 50,000 hours. 10.Therapy timer and total LED usage timer should be available. 11. The device should have a cooling system. 12. The device should have an in-built safety cut-off if the temperature increases. 13. Complete unit should conform to internationally accepted quality standards and should carry the certification of the applicable product quality standard such as FDA and CE. 14. User, technical, maintenance manuals to be supplied in English. 15. The machine shall carry a two years warranty on “fu1l parts and labour“ basis.		

Package Eight : Supply and installation of ICU Equipment

Nr	Equipment and Instrument	Specification	The most appropriate answer	Required Number
1	Cardiac bed	1. The bed shall be designed to manage the patient conveniently and its dimension shall be 2100L x 1000W x 550-750H mm approximately. 2. It shall be made of stainless steel or any other non-corrosive material with 15 cm strong caster wheels and of which two shall be with break facility. 3. The bed shall rest on rubber buffers at four corners. 4. The height of the bed shall be adjusted by hydraulic foot pump. 5. The back rest and leg rest shall be adjusted for the convenient position. 6. The head bow shall be made of stainless steel and foot bow with laminated panels. 7. The bed shall include a mattress, stainless steel I.V. rod and stainless steel collapsible side railings. 8. The equipment supplied shall have a comprehensive “Parts & Labour” replacement warranty for a period of at least 24 months from the date of delivery. 9. Fully graphic, illustrated original technical literature in English describing the equipment offered & detailing the specifications shall also be supplied with the offer. 10. A complete and detailed set of operation, service and maintenance literature in English must be supplied with each unit.		20
2	Blood & gas analyser	1 Power Requirements : 230V,+/- 10% AC mains supply 2 The machine must be a cartridge model single analyzer capable of measuring and displaying following parameters accurately in the given ranges with less than 150 µl of sample volume in syringe/capillary modes using separate cartridges for blood gas and electrolyte parameters. a) PH 6.8 - 7.8 b) PCO_2 8 - 115 mmHg		2

				c) PO_2 10 - 700 mmHg		
				d) K^+ 1 - 20 mmol/L		
				e) Na^+ 100 - 200 mmol/L		
				f) HCt 15 - 65 %		
				g) SO_2 30 - 100 %		
				h) Hb 5.0 - 24.0 g/dL		
				i) Lactate & Glucose		
				j) Ca^{2+}		
				Required calculated parameters :		
				a) TCO_2 3 - 50 mmol/L		
				b) HCO_3 3 - 50 mmol/L		
				c) BE -25.0 - 25.0 mmol/L		
				d) SBC 3 - 50 mmol/L		
			3	The unit must be able to accept different types of samples such as venous, capillary, arterial, mixed venous etc. and neonatal sample testing should be possible.		
			4	The unit should be totally maintenance free.		
			5	The unit must be capable of analyzing automatic continuous real time internal QC materials.		
			6	Sample probe must have self-cleaning facility to minimize the contamination.		
			7	The unit must have an on board and external printer facility and a detailed keyboard for easy operation.		
			8	Calibration must be fully automatic with the possibility to select the duration between two calibrations.		
			9	The unit must have a user friendly interface such as touch screen.		
			10	Storage and transport of reagent packs and other consumables should be		

				possible under normal environmental conditions and should not require any special facilities.		
			11	The reagent packs (cartridge) must contain all sensors, solution and sealed waste container for samples and reagent waste.		
			12	The unit must have a standby mode to save reagents when not in use.		
			13	The unit should have a facility to switch off any channel when not in use.		
			14	The unit should not require any type of gas cylinders.		
			15	Unit should have samples/patients data base.		
				General Requirements,		
			16	The unit must be warranted on full parts and labour basis for a period of at least three years from the date of installation.		
			17	Cost analysis for 5 years on the basis of 30 samples/week and 50 samples/week should be given separately.		
			18	The unit should be supplied with a UPS at least for 1 hour.		
			19	A cart for the unit should be included.		
			20	Unit costs of all consumables and all the reagents for the next 5 years should be given.		
			21	The total reagent and consumable cost for 5 years will be calculated and added with the price of the machine for the evaluation.		
			22	Original catalogues and product literature must be included in the bid.		
			23	Annual maintenance cost for each machine on parts & labour basis should be separately quoted for five years after the warranty period.		
3	Blood & fluid warmer			1. The unit shall operate on a power supply of 230 V ± 10%, 50 Hz. 2. The unit shall be an open system and microprocessor controlled operation. 3. Temperature range 37- 41^0 C in increments of 0.5^0 C. 4. Low and high temperature alarms and at 43^{0}C automatically shut- off. 5. Warm up time shall be less than 60 sec. 6. It should be possible to warm multiple infusions at the same time. 7. 2 years comprehensive warranty.		3

Package Nine : Supply and installation of Lab Equipment

Nr	Equipment and Instrument	Specification	The most appropriate answer	Required Number
1	Auto strainer	1. The system shall operate on main supply of 240 V ± 10% & 50Hz. 2. The system shall have the ability to store minimum 20 different staining programs with the handling load capacity up to not less than 10 sets of 40slides (400 slides). 3. The unit shall be enclosed system for monitoring of reagent usage and cost saving reagent management. 4. The system shall have agitation independently selectable for each reservoir and ergonomic, lab-friendly fume control system. 5. The unit should be simple intelligent instrument for unsurprised productivity by slide after slide & shift after shift. 6. The system should have the ability to start the staining process from a specific jar and end with any jar. 7. The system shall have the facility to indicate the staining process and the time spent in each jar in the staining process. 8. The system shall have the facility to indicate the staining process and the time spent in each jar in the staining process. 9. The system shall also have the in-built alarm system to indicate any wrong operation or procedure. 10. The unit memory should be capable for storing of minimum of 20 test programs and 50 program names with the minimum 80 solution names. 11. List of reference sites shall be provided with the offer 12. Fully graphic illustrated original technical literature in English describing the equipment offered & detailing the specifications shall also be supplied with the offer 13. Each unit shall be supplied with one set of operation manual &		1

		service manual in English 14. The equipment shall be warranted for a period of not less than 12 calendar months from the date of successful commissioning on full " parts & labour" basis. Such a warranty shall also include servicing and maintenance during the period of validity.		

Package Ten : Supply and installation of Imagining & Diagnostic Equipment

Nr	Equipment and Instrument	Specification	The most appropriate answer	Required Number
1	Ultrasound scanner	1. The unit shall operate on power supply of 230V +/- 10% 50 Hz.AC main power supply 2. The system should be of the latest state of the art platform with 512 digital beam forming technology 3. Processing channels should not be less than 2500 4. The system should be a multipurpose, high performance color imaging system designed for abdominal, vascular, obstetrics, gynecology, neonatal, urology, cardiac, transcranial and small parts applications. 5. Maximum scanning depth of 30cm should be possible. 6. Scanning methods – Electronic Sector, Electronic Convex and Electronic Linear. 7. Facility of Harmonic Imaging Tissue & Auto Tissue Optimization 8. Dynamic Range up to 197db should be possible 9. The system should have 3 active probe ports to connect 3 probes simultaneously 10. 15” High resolution color LCD Monitor with tilt and fold facility for easy viewing and movement. 11. The system shall support backlight keys or provide an integrated light for ease of use in darkened work areas. 12. Transducer types – Convex Array, Sector phased array, Micro Convex array and linear array.) 2.5 – 5.0 MHz Convex Probe for abdominal, fetal heart) 4.0 – 10.0 MHz Trans Vaginal Micro Convex probe for gynecology scanning		1

		) 5.0-13.0 MHz Linear Probe capable for Vascular Small parts, Neonatal, Auto IMT & Pediatrics scanning 13. The unit shall be associated and in co – operate with the facilities specified below) Operating Modes – B and M mode, Dual B Mode, spectral Doppler imaging, Color Doppler and Power Flow imaging.) The unit should be capable of performing with Corded Contrast as an Option) Alphanumeric keyboard with hard keys and 8 TGC controls.) Multiple focus Selection – minimum 8 focal points) Hard Disk Image storage (Minimum 250 GB Memory) and flexibility to review the stored images in clipboard format. Should be able to store single frames and cine loops.) Real Time Triplex at any Depth and PRF) Cine Memory – Over 1000 frames or 60 sec cine memory depend on FOV, Scanning lines and selectable cine sequence for cine review) Frame rate should not be less than 600) Facility to use USB storage media) Black and white thermal printer should be supplied) Complete measurement and analysis package with Real time Doppler calculations. Fetal trend graph etc. for all applications and all operating modes.) Should be able to adjust the factors in a Frozen image 14. DICOM 3 compatible. 13. The equipment (including the probes) shall be warranted for a period of not less than 24 calendar months from the date of successful commissioning on full parts, and labour basis. Such a warranty shall also include servicing and maintenance during the period of validity.		

		14. User training site of installation by an “Application Specialist “should be provided. 15. The equipment shall be constructed in such a way to prevent electrics and fire hazards ISO – 9002 certificate and other international standard for the safety of medical devices would be an added advantage.		
2	Automatic film processor	1. The equipment shall operate on a power supply of 230V= 10%, 50Hz, single phase. 2. The equipment shall be capable of handling X-ray film 100X100mm to 356x432mm. 3. The processing speed shall be not more than 90sec. dry and the processing capacity shall not be less than 150 sheets of 356x432mm film size per hour. 4. The developing temperature should be in between 30^0 -35^0 centigrade and the equipment shall have a temperature control system for continuous adjustment of developer temperature. There shall be a digital display to indicate the developer temperature. 5. The developer, fixer and washing tank capacity shall be not less than 7 liters in size and the tank construction shall be of either non corrosive stainless steel or of very strong not easily crackable plastic material. 6. The drying temperature shall be in between 50^0 – 60^0 centigrade and the equipment shall have a drying temperature control system for the adjustment of dryer temperature. 7. The unit shall include replenishment tanks for developer and fixer of a capacity not less than 20 liters each mounted on a movable flat form of trolley for easy access. 8. The film transport system shall be of continuous roller transport type, but not of the purely horizontal film transport type. 9. The unit shall include a film insertion detection system. 10. The unit shall incorporate a chemical and water agitation or circulation system.		1

		11. The equipment shall have a dryer exhaust system. 12. The washing water consumption shall not exceed 6 liters per minute and a wall mounted water filter shall be supplied with the equipment. 13. All the components of the equipment shall be resistant to corrosion. 14. The equipment shall be constructed in such a way to prevent electric and fire hazards. ISO 9002 certificate would be and advantage. 15. The offer shall address specifically and individually the specifications given here by providing printed, illustrated technical literature to substantiate conformity with the same. 16. Each unit shall be supplied with necessary operation and service manuals in English. 17. If there are no automatic film processors of the Model quoted presently in use in Government Hospitals in Sri Lanka, tenderer shall provide a sample unit for evaluation. 18. The equipment supplied must be covered by a comprehensive "parts & labour" warranty for a period of at least 24 months from the date of delivery. 19. Installation and commissioning of the equipment shall be carried out by the tenderer.		
3	Exercise Tolerance Test	The treadmill shall be a PC based complete system and the following requirements shall be fulfilled: 1. Power Supply: 230V AC mains +/- 10%, 50 Hz 2. Hardware - Minimum requirements: a. Core i5 b. Harddisk: 500 GB, RAM: 8 GB c. Hard copy support : Laser printer d. Display: 15" flat panel, colour e. Support USB compatible peripheral devices		1

		f. Necessary accessories 3. Clinical application software shall include: a. Simultaneous 12 Lead ECG acquisition & diagnostic display b. Freezing ECG tracing during procedure while real time ECG is displayed c. Print 12 lead ECG from frozen ECG tracing d. Multiple leads on screen view with selectable lead e. ST level change analysis f. Zoomed ECG g. Heart rate h. Total exercise time i. Impedance check to ensure quality of electrode contact j. User controlled filters; Muscle artifacts, AC interference, Base line wander etc. k. Treadmill control l. Ability to search for patient records based on name / ID m. Ability to store at least 100 final reports 4. Treadmill: a. Speed range 0.8 to 18 km/hour b. Elevation 0 to 22 % c. Patient weight up to 180 kg d. Steel side rails e. Fitted with an emergency stop 5. Printer data: a. Programme type b. Date/time c. Treadmill speed d. Blood pressure e. Filters activated f. Hospital name g. Patient information		

		h. Comments etc. 6. Automatic BP Monitor – **wall mounted** a. Systolic 50 to 250 mmHg b. Diastolic 20 to 200 mmHg c. Heart rate 40 to 250 BPM d. Sample interval : From integrated stress test system 7. General Requirements: a. The PC shall be a branded product supplied by the equipment manufacturer after strict quality control checks. Locally assembled PC will not be acceptable b. The bid shall be accompanied with 2 sample final reports of patients c. Any client reference in Sri Lanka, if available shall be given in the bid d. Each system shall be provided with chart recording paper sufficient to print 200 full reports e. Each system shall be provided with a suitable UPS f. The entire system shall be mounted on cart 12. Detailed installation, service and user manuals in English shall be supplied together with the equipment. 13. Fully graphic, illustrated original technical literature in English describing the equipment offered & detailing the specifications shall also be supplied with the offer. 14. The main unit and accessories must be covered by a comprehensive “parts & labour” warranty for a period of at least 24 months from the date of delivery.		

Package Eleven : Supply and installation of Hospital Furniture

Nr	Equipment and Instrument	Specification	The most appropriate answer	Required Number
1	Beds Adult	1. The dimension of the bed shall be 200L x 90W x 650H cm. 2. It shall be made of powder coated steel or any other non-corrosive material and with steel mesh and a mattress on top. 3. The bed shall be warranted for at least two years from the date of supply.		106
2	Beds Paediatric	1. The dimension of the bed shall be 128L x 90W x 650H cm. 2. It shall be made of powder coated steel or any other non-corrosive material and with steel mesh and a mattress on top. 3. The bed shall be warranted for at least two years from the date of supply.		74
3	Bed side locker	**Specification for Bed Side Locker** 1. The dimension of the locker may be approximately 400x 300x 800 (H) mm 2. The locker may be provided one drawer 3. The locker shall be made of high gauge enamel coated steel 4. The legs shall be provided with plastic foot rest. The locker shall be covered in three sides and door in front side 5. The locker could be movable on four swivel ball castors with break facility. 6. The locker shall be provided at least one year warranty from the date of supply		200
4	Ward round trolley	1. The dimension shall be approximately 760 x 500x 1100(H) mm and shall have only one shelf. 2. The trolley shall be made of stainless steel.		12

	(Doctor)	3. The trolley shall move on plastic caster wheels with bake for easy movement. 4. The unit shall be provided with at-least one-year warranty from the date of supply.		
5	Ward round trolley (Nurse)	1. The dimension shall be approximately 760 x 500x 900(H) mm. and made of full stainless steel with SS Bowl & Tray. 2. The trolley shall have two shelves with guardrail. 3. The top shelve shall have two drawers. 4. The trolley shall have plastic caster wheels with brake for easy movement. 5. The unit shall be provided with at-least two years warranty from the date of supply.		12
6	Wheel Chair	1. The chair shall be made of stainless steel. 2. The size of the chair shall be approximately 670 mm W x 1100 mm D x 920mm H. 3. The chair shall move on two large rubber wheels with stainless steel rim fixed to it in rear side and two rubbers small wheels rotatable fitted it in front side. 4. The chair shall consist of front footrest, armrest and operator handle. 5. The chair shall be provided at-least two years warranty from the date of supply.		16
7	Patient Trolley	1. The trolley shall be made of stainless steel with heavy gauge. 2. The dimension shall be approximately 200x 55x 80 cm. 3. Trolley shall move on 15cm castor wheels with brake facility. 4. The unit shall be provided with at least two years warranty from the date of supply		16

Package Twelve : Supply and installation of General Furniture

<table>
<tr><th>Nr</th><th>Equipment and Instrument</th><th>Specification</th><th>The most appropriate answer</th><th>Required Number</th></tr>
<tr><td>1</td><td>Steel Almarah</td><td>1. The dimension of the cabinet may be approximately 620L x 400W x 1600H mm with single door.
2. This shall be made of high gauge enamel coated steel and glass door providing good visibility of contents.
3. The cupboard shall have six glass shelves.
4. All glass should be toughened to aid security.
5. The medicine cupboard shall be provided at least one year warranty from the date of supply.</td><td></td><td>10</td></tr>
<tr><td>2</td><td>Revolving Chair</td><td>1. The chair shall be made of stainless steel.
2. The size of the chair shall be approximately 670 mm W x 1100 mm D x 920mm H.
3. The chair shall move on two large rubber wheels with stainless steel rim fixed to it in rear side and two rubbers small wheels rotatable fitted it in front side.
4. The chair shall consist of front footrest, armrest and operator handle.
5. The chair shall be provided at-least two years warranty from the date of supply.</td><td></td><td>20</td></tr>
<tr><td>3</td><td>Executive Table</td><td><table><tr><td>01</td><td>MDF Board</td></tr><tr><td>02</td><td>Board Thickness at lest-30mm</td></tr><tr><td>03</td><td>Executive Table, Computer Table with Key Board track, Small Cupboard with two drawers, Movable CPU track</td></tr><tr><td>04</td><td>Executive Table size:150cm or above (L)x 80cm or above(W)x75 cm (H)
Computer Table size :105 cm or above (L) x 55 cm or above(W) x 75 cm (H)</td></tr></table></td><td></td><td>8</td></tr>
</table>

		04	It shall be warranted for one year from the date of supply			
		05	Relevant picture/catalogues/images/technical information should be attached			

Package Thirteen : Supply and installation of General Equipments

Nr	Equipment and Instrument	Specification	The most appropriate answer	Required Number
1	Refrigerator	1. The Refrigerator shall be a double door type and operate on 230V±10%, 50Hz main supply. 2. The capacity of the refrigerator shall be greater than 220 l. 3. The type shall be non frost, CFC free, double door. 4. The compressor shall be a good brand and shall have at least five year warranty from the date of supply. 5. The Refrigerator shall have at least two years from the date of supply.		12
	Floor Cleaning machine	1. The unit shall function on power supply of 230V{ 10%, 50 Hz. 2. The motor power shall be at least 1.5 HP. 3. Brush rotation shall be at least 200 rpm. 4. Solution tank capacity shall be at least 10 gallons. 5. Power cord length shall be at least 70 feet. 6. Productivity shall be at least 15,000 sq feet per hour. 7. 2 years comprehensive warranty.		2

Annexure B: Price Schedule Form

B- 1 : Price Schedule for Supply and Installation Critical Care Equipment

SN	Equipment and instrument	Req. No	Rate per Unit SLR	Custom duty, Sales Tax or other taxes SLR	Total amount with Custom duty and taxes SLR	Total amount without Custom duty and taxes SLR
1	Wall Oxygen System	1				

(Please submit separate forms for any alternate models proposed)

VAT registration number …… (if applicable)

Total amount in words; Sri Lankan Rupees

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Signature of the Bidder ……

(Common Seal of the Company)

Name & address of the Company -

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Name address of the Authorized Officers: ……..……

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Telephone Number - ……. Fax Number - ……

Date ……/ ..…/ 2016

B- 2 : Price Schedule for Supply and Installation ICU Devices

SN	Equipment and instrument	Req. No	Rate per Unit SLR	Custom duty, Sales Tax or other taxes SLR	Total amount with Custom duty and taxes SLR	Total amount without Custom duty and taxes SLR
1	Portable Ventilators	2				
2	Portable Ventilators- Pediatric	1				
3	Ventilator	3				
4	Defibrillator with Pacer	6				

(Please submit separate forms for any alternate models proposed)

VAT registration number …… (if applicable)

Total amount in words; Sri Lankan Rupees

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Signature of the Bidder ……

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(Common Seal of the Company)

Name & address of the Company -

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Name address of the Authorized Officers: ……..……

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Telephone Number - ……. Fax Number - ……

Date ……/ ..…/ 2016

B- 3 : Price Schedule for Supply and Installation Hospital Furniture

SN	Equipment and instrument	Req. No	Rate per Unit SLR	Custom duty, Sales Tax or other taxes SLR	Total amount with Custom duty and taxes SLR	Total amount without Custom duty and taxes SLR
1	Syringe Pumps	24				
2	Infusion Pumps	16				

(Please submit separate forms for any alternate models proposed)

VAT registration number …… (if applicable)

Total amount in words; Sri Lankan Rupees

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Signature of the Bidder ……

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(Common Seal of the Company)

Name & address of the Company -

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Name address of the Authorized Officers: ……..……

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Telephone Number - ……. Fax Number -

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Date ……/ ..…/ 2016

B- 4 : Price Schedule for Supply and Installation Lab and PBU Equipment

SN	Equipment and instrument	Req. No	Rate per Unit SLR	Custom duty, Sales Tax or other taxes SLR	Total amount with Custom duty and taxes SLR	Total amount without Custom duty and taxes SLR
1	Multipara monitors-Basic	18				
2	Multipara monitors- Advanced	6				
3	Pulse oxymeters	6				

(Please submit separate forms for any alternate models proposed)

VAT registration number …… (if applicable)

Total amount in words; Sri Lankan Rupees

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Signature of the Bidder ……

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(Common Seal of the Company)

Name & address of the Company -

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Name address of the Authorized Officers: ……..……

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Telephone Number - ……. Fax Number -

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Date ……/ ..…/ 2016

B- 5 : Price Schedule for Supply and Installation Radiology Equipment

SN	Equipment and instrument	Req. No	Rate per Unit SLR	Custom duty, Sales Tax or other taxes SLR	Total amount with Custom duty and taxes SLR	Total amount without Custom duty and taxes SLR
1	Portable Sucker	2				
2	Sucker	2				
3	Mini Autoclave	6				
4	ECG Recorders	5				

(Please submit separate forms for any alternate models proposed)

VAT registration number …… (if applicable)Total amount in words; Sri Lankan Rupees ……

Signature of the Bidder ……

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(Common Seal of the Company)

Name & address of the Company -

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Name address of the Authorized Officers: ……..……

Telephone Number - ……. Fax Number - ……

Date ……/ ..…/ 2016

B- 6 : Price Schedule for Supply and Installation of Operating theatre Equipment

SN	Equipment and instrument	Req. No	Rate per Unit SLR	Custom duty, Sales Tax or other taxes SLR	Total amount with Custom duty and taxes SLR	Total amount without Custom duty and taxes SLR
1	Anesthesia Machine	2				
2	Diathermy	3				
3	OT Lamp	2				

(Please submit separate forms for any alternate models proposed)

VAT registration number …… (if applicable)

Total amount in words; Sri Lankan Rupees

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Signature of the Bidder ……

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(Common Seal of the Company)

Name & address of the Company -

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Name address of the Authorized Officers: ……..……

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Telephone Number - ……. Fax Number -

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Date ……/ ..…/ 2016

B-7 : Price Schedule for Supply and installation of PBU Equipment

SN	Equipment and instrument	Req. No	Rate per Unit SLR	Custom duty, Sales Tax or other taxes SLR	Total amount with Custom duty and taxes SLR	Total amount without Custom duty and taxes SLR
1	Phototherapy unit	1				
2	Incubator-Infant	2				

(Please submit separate forms for any alternate models proposed)

VAT registration number …… (if applicable)

Total amount in words; Sri Lankan Rupees

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Signature of the Bidder ……

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(Common Seal of the Company)

Name & address of the Company -

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Name address of the Authorized Officers: ……..……

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Telephone Number - ……. Fax Number - ……

Date ……/ ..…/ 2016

B-8 : Price Schedule for Supply and installation of ICU Equipment

SN	Equipment and instrument	Req. No	Rate per Unit SLR	Custom duty, Sales Tax or other taxes SLR	Total amount with Custom duty and taxes SLR	Total amount without Custom duty and taxes SLR
1	Blood Gas Analyzer	2				
2	Blood fluid Warmer	3				
3	Cardiac bed	20				

(Please submit separate forms for any alternate models proposed)

VAT registration number …… (if applicable)

Total amount in words; Sri Lankan Rupees

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Signature of the Bidder ……

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(Common Seal of the Company)

Name & address of the Company -

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Name address of the Authorized Officers: ……..……

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Telephone Number - ……. Fax Number - ……

Date ……/ ..…/ 2016

B-9 : Price Schedule for Supply and installation of Lab Equipment

SN	Equipment and instrument	Req. No	Rate per Unit SLR	Custom duty, Sales Tax or other taxes SLR	Total amount with Custom duty and taxes SLR	Total amount without Custom duty and taxes SLR
1	Auto Stainer	1				

(Please submit separate forms for any alternate models proposed)

VAT registration number …… (if applicable)

Total amount in words; Sri Lankan Rupees

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Signature of the Bidder ……

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(Common Seal of the Company)

Name & address of the Company -

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Name address of the Authorized Officers: ……..……

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Telephone Number - ……. Fax Number - ……

Date ……/ ..…/ 2016

B-10 : Price Schedule for Supply and installation of Imagining & Diagnostic Equipment

SN	Equipment and instrument	Req. No	Rate per Unit SLR	Custom duty, Sales Tax or other taxes SLR	Total amount with Custom duty and taxes SLR	Total amount without Custom duty and taxes SLR
1	Ultrasound Scanner	1				
2	Automatic Flim processor	1				
3	Exercise Tolerance Test	1				

(Please submit separate forms for any alternate models proposed)

VAT registration number …… (if applicable)

Total amount in words; Sri Lankan Rupees

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Signature of the Bidder ……

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(Common Seal of the Company)

Name & address of the Company -

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Name address of the Authorized Officers: ……..……

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Telephone Number - ……. Fax Number - ……

Date ……/ ..../ 2016

B-11 : Price Schedule for Supply and installation of Hospital Furniture

SN	Equipment and instrument	Req. No	Rate per Unit SLR	Custom duty, Sales Tax or other taxes SLR	Total amount with Custom duty and taxes SLR	Total amount without Custom duty and taxes SLR
1	Beds- Adult	106				
2	Beds -Paediatric	74				
3	Bed side locker	200				
4	Ward round trolley (Doctor)	12				
5	Ward round trolley (Nurse)	12				
6	Wheel Chair	16				
7	Patient Trolley	16				

(Please submit separate forms for any alternate models proposed)

VAT registration number …… (if applicable)

Total amount in words; Sri Lankan Rupees

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Signature of the Bidder ……

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(Common Seal of the Company)

Name & address of the Company -

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Name address of the Authorized Officers: ……..……

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Telephone Number - ……. Fax Number - ……

Date ……/ ..…/ 2016

B-12 : Price Schedule for Supply and installation of General Furniture

SN	Equipment and instrument	Req. No	Rate per Unit SLR	Custom duty, Sales Tax or other taxes SLR	Total amount with Custom duty and taxes SLR	Total amount without Custom duty and taxes SLR
1	Steel Almarah	10				
2	Revolving Chair	20				
3	Executive table	8				

(Please submit separate forms for any alternate models proposed)

VAT registration number …… (if applicable)

Total amount in words; Sri Lankan Rupees

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Signature of the Bidder ……

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(Common Seal of the Company)

Name & address of the Company -

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Name address of the Authorized Officers: ……..……

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Telephone Number - ……. Fax Number - ……

Date ……/ ..…/ 2016

B-13 : Price Schedule for Supply and installation of General Equipments

SN	Equipment and instrument	Req. No	Rate per Unit SLR	Custom duty, Sales Tax or other taxes SLR	Total amount with Custom duty and taxes SLR	Total amount without Custom duty and taxes SLR
1	Refrigerator	12				
2	Floor Cleaning Machine	02				

(Please submit separate forms for any alternate models proposed)

VAT registration number …… (if applicable)

Total amount in words; Sri Lankan Rupees

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Signature of the Bidder ……

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(Common Seal of the Company)

Name & address of the Company -

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Name address of the Authorized Officers: ……..……

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Telephone Number - ……. Fax Number - ……

Date ……/ ..…/ 2016

Annexure C: Manufacturer's Authorization

[The Bidder shall require the Manufacturer to fill in this Form in accordance with the instructions indicated. This letter of authorization should be on the letterhead of the Manufacturer and should be signed by a person with the proper authority to sign documents that are binding on the Manufacturer. The Bidder shall include it in its bid, if so indicated in the BDS.]

Date: ……..
No.: ……

To: ……..

WHEREAS

We……, who are official manufacturers of ……., having factories at [insert full address of Manufacturer's factories], do hereby authorize …… to submit a bid the purpose of which is to provide the following Goods, manufactured by us ……, and to subsequently negotiate and sign the Contract.

Signed: ……..

Name: ……

Title: ……

Duly authorized to sign this Authorization on behalf of: ……

Dated on _____ day of _____, _____ .

Annexure D

BID BOND FORM

Whereas ……Hereinafter called "The TENDERER" has submitted his/their Tender dated ……. For the supply and Installation of Medical Equipment to Vavuniya Hospital", as per specification schedule annexed. Know all men by these presents that we …….. .. . . …….. (Here in after called the Bank) are bound to the _____ _____. (Here in after called THE PURCHASER) in the sum of ..... ……for which payment well and truly to be made to the said PURCHASER The bank binds itself, its successors and assigns by these presents sealed with the common seal of the said bank this Day of 201.

The conditions of the obligation are:- .

1. If the TENDERER withdraws his bid during the period of bid validity specified by the TENDERER on the bid form or

2. If the TENDERER having being notified of the acceptance of his bid by the PURCHASER' during the period of Bid validity

a. Fails or refuses to execute the CONTRACT.

Or

b. Fails or refuses to furnish the performance bond. We undertake to pay to the PURCHASER up to the above amount upon receipt of his first written demand, without the PURCHASER having to substantiate his demand PURCHASER will state that the amount claimed by him is due to him owing to the occurrence of one or both conditions, specifying the occurred condition or conditions.

This guarantee will remain in Force up- to and including 120 days after the period at BID validity, and any demand in respect thereof should reach the BANK not later than the above date.

…….
Signature of the Bank

Annexure E

PERFORMANCE BOND FORM

"Supply and installation of Medical Equipment to Vavuniya Hospital"

Whereas hereinafter Called "The SUPPLIER" has undertaken, in pursuance of CONTRACT dated 2016 to supply and installation of Medical equipment to Vavuniya Hospital.

Hereinafter called "The CONTRACT" and where as it has been by you in the said CONTRACT that the SUPPLIER shall furnish you with a “Bank. Guarantee” by a recognized Bank for the sum specified herein as security for compliance with the SUPPLIER's performance obligation in accordance with the CONTRACT and whereas we agreed to give the SUPPLIER a Guarantee.

Thereof we hereby affirm that we are guarantors and responsible to you on behalf of SUPPLIER, up to a total of and we undertake to pay you upon, your first written demand declaring the SUPPLIER to be in default under the CONTRACT and without cavil or argument any sum or sums within the limits of ..... as aforesaid, without your needing to prove or to show grounds or reasons for your demand or the sum specified therein. This guarantee is valid until the ..... day of 2016..

……..
Signature and the Seal of the Bank

..... We understand that you are not bound to accept the lowest or any tender you may receive Dated this ……...……day of …… Two Thousand and Eleven.

Signature ……..

……in the capacity of …… duly authorized to sign tenders for and on behalf of ……
……
……(Name and Address of the company)

(IN BLOCK CAPITAL LETTERS)

Name : _____
_____
_____

WITNESSES
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Address:
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Signature:
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Name
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Address:
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Signature: