Amendment No. 2

Date: 31/07/2014

Sub: Amendment to the tender Enquiry Document

Ref: Tender Enquiry No.: HLL/PCD/Rohtak/01/14-15 dated 24/06/2014 read with its amendment no. 1 dated 25.07.2014

The following changes are incorporated in the technical specifications of the referred tender enquiry.

Section – VII
Technical Specifications

Item no. 1

Monitors with Central Station

1. **Existing: Para 1.** Advanced high end modular patient monitor having integrated non-invasive, invasive measurement & features suitable for neonate, pediatrics & adult patients.

   Read as: Para 1. Advanced high end modular/ **New Modular** patient monitor having integrated non-invasive, invasive measurement & features suitable for neonate, pediatrics & adult patients.

2. **Existing: Para 5.** Monitors must be able to monitor ECG, SpO2, NIBP, Respiration, dual temp, dual IBP, modular ETCO2 and minimally invasive Continuous Cardiac Output.

   Read as: Para 5. Monitors must be able to monitor ECG, SpO2, NIBP, Respiration, dual temp, dual IBP, modular ETCO2. (**minimally invasive Continuous Cardiac Output-Optional)**

3. **Existing: Para 8.** System must have minimum 24 hours review data including graphical and tabular trends, arrhythmia event recalls, alarms. Full disclosure for user selectable waveform, hemo and **lung trends.**

   Read as: Para 8. System must have minimum 24 hours review data including graphical and tabular trends, arrhythmia event recalls, alarms. Full disclosure for user selectable waveform and hemo.

4. **Existing: Para 16.** Monitor must be U.S. FDA or European CE approved.

   Read as: Para 16. Monitor must be USFDA **and** European CE approved.

5. **Existing: Para 19.** CNS of 21" LED to be provided with one laser printer and one 21" slave monitor. The cabling has to be done by bidder in the ICU One CNS with 6,8,12 monitors respectively.

Read as: Para 19. CNS of **19" or more** LED to be provided with one laser printer and one 21" slave monitor. The cabling has to be done by bidder in the ICU One CNS with 6,8,12 monitors respectively.

6. **Existing: 20 Added Para b:-** Two Modules of minimally invasive CO monitor for each set/dept.

   Read as: 20 Added Para b:- Two Modules of minimally invasive CO monitor for each set/dept. **(Optional)**

7. **Existing: 20 Added Para c:-** Two modules of NMT, EEG and **spirometer**, BIS/Entropy for each dept. except medicine dept. (Price of these modules to be quoted separately)

   Read as 20 Added Para c:- Two modules of NMT, EEG and BIS/Entropy for each dept. except medicine dept. (Price of these modules to be quoted separately)

8. **Existing: 20 Added Para h**:- OPTIONAL: To provide suitable facility for sending and receiving DICOM compatible radiological images like Ultrasound, X-ray etc. to and from monitoring network to and from HIS, RIS etc. for integration of various information (Optional-Price to be quoted separately)

   Read as 20 Added Para h: DELETED

9. **Existing: 20 Added Para i** :- It should be possible to see data of other patient on the monitor in the same ICU and **patients of other ICU's or the monitor by LAN cabling.** The cabling should be done by the bidder.

   Read as 20 Added Para i :- It should be possible to see data of other patient on the monitor in the same ICU . The cabling should be done by the bidder.

10. **Existing: 20 Added Para m (i)** :- Should be USFDA or European CE approved product.

    Read as 20 Added Para m (i): Should be USFDA **and** European CE approved product.

Item no. 2

Multi Para Vital Sign Monitors with EtCO2 (Modular) and with AGM

1. **Existing: Para 1.** Advanced high end modular patient monitor having integrated non-invasive, invasive measurement & features suitable for neonate, pediatrics & adult patients.

   Read As: Para 1. Advanced high end modular/**New Modular** patient monitor having integrated non-invasive, invasive measurement & features suitable for neonate, pediatrics & adult patients.

2. **Existing: Para 4.** Monitors must be able to monitor ECG, SpO2, NIBP, Respiration, dual temp, dual IBP, modular ETCO2 and **minimally invasive Continuous Cardiac Output.**

Read As: Para 4. Monitors must be able to monitor ECG, SpO2, NIBP, Respiration, dual temp, dual IBP and modular ETCO2

3. **Existing: Para 15.** Monitor must be U.S. FDA or European CE approved.

   Read As: Para 15. Monitor must be U.S-FDA **and** European CE approved.

4. **Existing: Para 18 Added Para:- a.** One module each for ECG, SpO2,NIBP, Respiration, dual temp, 2 IBP,EtCO2 & 2 with AGM. AGM Module in all monitors except 4 in CTVS (independent/dual).

   Read As: Para 18 Added Para:- a. One module each for ECG, SpO2, NIBP, Respiration, dual temp, 2 IBP,**All monitor should have AGM with ETco2 monitoring module with additional Etco2 module with each monitor except 4 in CTVS (independent/dual).**

5. **Existing: Para 18 Added Para:-b.** Two Modules of minimally invasive CO monitor for Anaesthesia, CTVS, Em OT.

   Read As: Para 18 Added Para:-b. DELETED

6. **Existing: Para 18 Added Para:-c.** Two modules of NMT, EEG and **spirometer,** BIS/Entropy for Anaesthesia, Em OT.

   Read As: Para 18 Added Para:-c. Two modules of NMT, EEG and BIS/Entropy for Anaesthesia, Em OT.

7. **Existing: Para 18 Added Para:-h. OPTIONAL:**To provide suitable facility for sending and receiving DICOM compatible radiological images like Ultrasound, X-ray etc to and from monitoring network to and from HIS, RIS etc for integration of various information (Optional-Price to be quoted separately).

   Read As: Para 18 Added Para:-h. DELETED

8. **Existing: Para 18 Added Para:-l i.** Should be USFDA or European CE approved product.

   Read As: Para 18 Added Para:-l i. Should be USFDA **and** European CE approved product.

Item no. 3

Multi Para Vital Sign Monitors with EtCO2 (Modular)

1. **Existing: Para 1.** Wall mounted modular unit suitable for all patient categories. i.e. neonates and infants, children and adolescents.

   Read as: Para 1. Wall mounted modular/**New modular** unit suitable for all patient categories. i.e. neonates and infants, children and adolescents.

2. **Existing: Para 2.** Parameters monitored: ECG, HR. Respiration rate, SPO2 (Nellcor/Masimo), NIBP, Temperature (Skin & rectal) and Inbuilt EtCO2 (sidestream/microstream).

   Read As Para 2: Parameters monitored: ECG, HR. Respiration rate, SPO2 (Nellcor/Masimo/ or **Equivalent Technology**), NIBP, Temperature (Skin & rectal) and Inbuilt EtCO2 (sidestream/microstream/ **Mainstream**).

3. **Existing: Para 6.** NIBP oscillometric step deflation, manual/automatic, **initial inflation pressure user selectable.**

   Read As: Para 6. NIBP oscillometric step deflation, manual/automatic.

4. **Existing: Para 13.** Trend display (numerical and graphic) from 48 hrs. or more facility for zooming in up to 1 min. The trends data should not be lost on switching off the monitor.

   Read as: Para 13. Trend display (numerical and graphic) from **24 hrs facility** for zooming in up to 1 min. The trends data should not be lost on switching off the monitor.

5. **Existing: Para 15.** RS 232 serial data output provision (peripheral printer or network), analogue output for ECG.

   Read As Para 15: RS 232/ **Ethernet/USB** serial data output provision (peripheral printer or network), analogue output for ECG.

6. **Existing: Para 19.** Should be European CE/ US FDA approved product.

   Read as: Para 19. Should be European CE **and** US FDA approved product.

7. **Existing: Para 20 c i.** System should be ready to run the web based application without need of additional server/PC hardware or software up-gradation.

   Read As: Para 20 c i. DELETED

8. **Existing: Para 20 c ii.** Para:5: EtCO2 (sidestream/microstrem): Approx. 20-80 mmHg Skin Temperature::28-42°C.

   Read As: Para 20 c ii. Para:5: EtCO2 (sidestream/microstrem/ **Mainstream**) :Approx. 20-80 mmHg Skin Temperature::28-42°C.

9. **Existing: Para 23. a. Should** be USFDA or European CE approved product.

   Read As: Para 23. a. Should be USFDA **and** European CE approved product.

Item no. 4

I.C.U Beds

1. Existing: Para 3.10. Mattress of the Bed should be made up of high density foam with Anti-Microbial agent incorporated into all components that assists in Prohibiting growth of bacteria & fungi and easy to clean.

Read As: Para 3.10. Mattress of the Bed **to be supplied,** should be made up of high density foam with Anti-Microbial agent incorporated into all components that assists in Prohibiting growth of bacteria & fungi and easy to clean.

Item no. 5

ICU INVASIVE VENTILATOR

1. **Existing: Para 2.** Screen should be minimum of 12" inch or more and integrated.

   Read as Para 2: Screen should be minimum of **10"** inch or more and integrated.
2. **Existing: Para 3.** Compressed air / oxygen driven.

   Read as: Para 3. Compressed air from **wall mounted/ External compressor/ Internal Compressor/**Oxygen driven.

3. **Existing: Para 4 . e .** Advanced mode like Pressure Regulated volume control mode and volume support mode.

   Read as: Para 4.e. Advanced mode like Pressure Regulated volume control mode and volume support mode or **any equivalent mode.**

4. **Existing: Para 5.a.** Tidal Volume: Minimum 5ml and maximum of 1500 ml or more in Volume control.

   Read As: Para 5.a. Tidal Volume: **Minimum 10ml** and maximum of 1500 ml or more in Volume control.

5. **Existing:Para 5. i.** Inspiratory and Expiratory flow and **pressure Trigger** Sensitivity.

   Read As: Para 5.i. Inspiratory and Expiratory flow Trigger Sensitivity.

6. **Existing: Para 15 .** Should be supplied with 2 nos. Reusable Silicon adult the 1 no Pediatrics tubing and imported humidifier and 2 nos. ultrasonic nebulizers chambers.

   Read as : Para 15. Should be supplied with 2 nos. Reusable Silicon adult the 1 no Pediatrics tubing and imported **Servo controlled humidifier** and 2 nos. Ultrasonic/ **pneumatic** nebulizers with capability of producing <3 micron drug particle.

7. **Existing: Para 17.** Ventilator should have external compressor, from the same manufacturer **(Optional - price to be quoted separately).**

Read as : Para 17. Ventilator should have **Internal compressor/external compressor**, from the same manufacturer.

8. **Existing : Para 19.** Oxygen sensor should be paramagnetic and covered under warranty.

   Read as: Para 19. Oxygen sensor should be paramagnetic/**Galvanic/ ultrasonic** and covered under warranty & CMC period.

Item no. 6

Non-Invasive Ventilator

1. **Existing :Para 3.** Breath rate upto 50 BPM with spontaneous for time mode.

   Read as: Para 3. Breath rate **upto 4 to 30 BPM** with spontaneous for time mode.

2. **Existing : Para 17.** Mode:- CPAP withPS, Biphasic pressure control, apnea backup.

   Read as: Para 17. Mode:- Spontaneous: Pressure support, CPAP.
   Mandatory: Pressure control,

   Additional- Proportional assist or pressure support with volume guarantee or an equivalent mode.

   ADDED PARA: should be able to deliver oxygen concentration from 21-100%.

Item no. 7

Defibrillator with CPR Monitoring and TC Pacing

1. **Existing : Para 2.** The defibrillator should be Biphasic waveform with 3 wave form display with screen size minimum 6 inches diagonal.

   Read as: Para 2. The defibrillator should be Biphasic waveform with 3 wave form display with screen size minimum **5** inches diagonal.

2. **Existing : Para 5.** In manual mode the unit should provide energy selection at (1-10, 15, 20,30,50,70,85,100,150,200) joules.

   Read as: Para 5. In manual mode the unit should provide energy selection.

3. **Existing: para 6.** It should have ability to measure chest compression rate and depth in real time with both visual & audible feedback and optional CPR index on screen.

   Read as: Para 6. DELETED

4. **Existing: para 9.** It should have ability to filter out CPR artifacts and allowing person to see organized rhythms without interrupting chest compression.

   Read as: Para 9. DELETED

5. **Existing: Para 12. d**. Reusable CPR feedback sensor/ or similar product reused at least on 90 patients – 2

   Read as : Para 12. d. DELETED

ADDED PARA:

(1) Suitable carrying trolley must be supplied with each defibrillator.
(2) Demonstration of offered model is must.

Item no. 8

Infusion Pump (Volumetric)

1. **Existing: Para 3.10** RS232C/USB/RS485 output for Printer, PC connectivity and Data acquisition with selectable baud rate options should be there.

   Read as : Para 3.10 . DELETED

2. **Existing: Para 3.11** Accuracy ±3%.

   Read as : Para 3.11: Accuracy **±5%.**

3. **Existing : Para 4.1** Compatible with any standard infusion sets available in local Indian market.
   Read as : Para 4.1. Compatible with any standard (PVC) infusion sets available in local Indian market.

Item no. 9

SYRINGE INFUSION PUMPS

Existing: Para 2. Must Work on commonly available standard 5ml,10ml, 20ml, 50ml ,**60 ml** Syringes with accuracy of minimum of +/-2% or better, with automatic syringe size recognition.

Read as : Para 2. Must Work on commonly available standard 5ml,10ml, 20ml, 50ml ,Syringes with accuracy of minimum of **+/-3%** or better, with automatic syringe size recognition.

Item no. 10

MICROPROCESSOR BASED FULLY AUTOMATIC VACUUM INFILTRATION BIOPSY PROCESSING SYSTEM (TISSUE PROCESSOR)

1. **Existing:** Minimum capacity of 200 cassettes.

   Read as: Minimum capacity of **250 cassettes**.

2. **Existing:** At least 15 processing programme with compensatory mechanism for delay facility for manual programming **for 50 types of solution** and display of reagents level.

   Read as: At least **10 processing** programme with compensatory mechanism for delay facility. Manual programming and display of reagents levels.

3. **Existing:** All the accessories including 1000 reusable cassettes.

   Read as: The equipment must be supplied with all the standard accessories and fitments to attain full functionality of the equipment. Twenty five thousand disposable cassettes must be supplied at the time of installation.

ADDED Para: The unit rate of disposable cassette must be quoted separately (Approx consumption 50,000 per year) . These rates will be freeze for 5 years. The vendor will have to make supplies of the disposable cassette within 4-6weeks of issue of supply order.

4. **Existing:** Facility for completion of tissue processing, even if there are faulty condition.

   Read as: In case power supply is disrupted , the tissue processing should resume automatically on restoring of power supply.

5. **Existing:** Environmentally safe with mechanism for discharge of fumes and biosafty devices.

   Read as: The equipment must be fitted with fume extraction control device.

Item no. 11

MICROPROCESSOR CONTROLLED AUTOMATIC SLIDE STAINER WITH COMPATIBLE COVER-SLIPPER

1. **Existing:** Reservoir capacity- 500 ml (minimum)

   Read as: Reservoir capacity- **300 ml** (minimum)

2. **Existing:** Coverslipper compatible with autostainer to accept dried slide-racks obtained from end point of autostainer with minimum capacity of 200 slides/Hour.

   Read as: Auto stainer and cover slipper may be a **single unit or separate module that must be interfaced/ compatible** with minimum capacity of 200 slides/hr.

Item no. 13

Mid-range Whole Body Colour Doppler

1. **Existing: Para 1.1** The system shall support backlight keys or provide an integrated light for ease of use in darkened work areas. **The backlighting shall be tri-state to further simplify ease of use and indicate function selected.**

   Read as: Para 1.1: The system shall support backlight keys or provide an integrated light for ease of use in darkened work areas.

2. **Existing: Para 3.** Unit should have Auto IMT (Intima media thickness measurement) facility.

   Read as: Para 3. Unit should have **semi auto/ Auto IMT** (Intima media thickness measurement) facility.

3. **Existing: Para 5.1** The system shall allow for post-storage image manipulation to provide maximum image flexibility, review and productivity. It shall include, at a minimum the ability to change the: Overall B-Mode gain, dynamic range and gray scale maps. Overall Doppler gain, base line shift, sweep speed and inverted spectral waveform.

   Read as: Para 5.1 The system shall allow for **Real time or frozen** image manipulation to provide maximum image flexibility, review and productivity. It shall include, at a minimum the ability to change the: Overall B-Mode gain, dynamic range and gray scale maps. Overall Doppler gain, base line shift, sweep speed and inverted spectral waveform.

4. **Existing: Para 8.6.** The system shall provide the user with the ability to add a **spectral peak and spectral mean trace onto the spectrum in both real time or after freezing the image.**

   Read as: Para 8.6. The system should have auto colour with Doppler facility.

5. **Existing: Para 12.** DICOM Connectivity should be a standard feature with the hospital network and **a standalone PC (Windows based) with suitable DICOM viewer to be supplied.**

   Read as: Para 12. DICOM Connectivity should be a standard feature with the hospital network.

6. **Existing: Para 13. d.** Sector probe/ microconvex probe for pediatric neurosonography 2-5 MHz.

   Read as Para 13. d: Sector probe/ microconvex probe for pediatric neurosonography 2-5 MHz. **(Optional)**

7. **Existing: Para 14.** The unit must be US FDA and CE approved.

   Read as: Para 14. The unit must be US FDA **or** CE approved.

Item sl. no. 14

Portable Colour Doppler System

1. **Existing Para:-** The system should have minimum128 channels receiving & transmitting.

   Read as Para: - The system should have minimum **4000 channels receiving** & transmitting.

2. **Existing Para:-** Should have integrated colour display screen size of at least 10 inches or more.

   Read as Para: - Should have integrated colour display screen size of at **least 15 inches or more.**

3. **Existing Para:-** Should have high frame rate of more than 120 frames / sec

   Read as Para: - Should have high frame rate of more than **200 frames / sec.**

4. **Existing Para:-** Should have inbuilt image storage facility for at least 100 Images.

   Read as Para: - Should have inbuilt image storage facility for at **least 1,00 ,00 Images.**

5. **Existing Para:-** C 24 Broadband phased array for cardiology, general imaging, abdominal.

   Read as Para: - Phased array probe for cardiology, general imaging, abdominal.

6. **Existing Para:-** 2-5 MHz Broad Band convex Probe for abdominal, ob, gyn applications.

   Read as Para: -2.5-5 MHz Broad Band convex Probe for abdominal, ob, gyn applications.

7. **Existing Para:-** 5-12 MHz broadband linear probe for vascular application.

   Read as Para: -5-10 MHz broadband linear probe for vascular application.

Added Para:-

1. Phased array probe(cardiac probe) for infant and paediatrics use- 5-7 MHz
2. System should have USFDA and European CE approved.

Item sl. no. 16

High Speed Drill & Cranial Stablization System for Neurosurgery

1. **Existing Para: -** Maximum Torque should be 61 mN-m

   Read as Para: - Torque should be 6mNm.

Item sl. no. 17

Digital Video EEG Machine

1. **Existing Para 3.1 :-** 32 CHANNEL VIDEO EEG MONITORING SYSTEM with 10 DC Channels; Sleep Hardware and software (Optional).

   Read as Para: -32 CHANNEL VIDEO EEG **machine with 10 DC Channels; Sleep Hardware and software as per guidelines of AASM (American Academy of sleep Medicare)**

2. **Existing Para 3.1.5 :-** Continuous impedance testing of electrodes during acquisition video data editing capabilities with and without EEG data.

   Read as Para 3.1.5 : -

   A) Continuous impedance testing of electrodes during acquisition

   B) Video data editing capabilities with and without EEG data.

3. **Existing Para 4.2.1 :-** 1.EEG Cable(with extra one cable) with connections and 5 sets of gold plated EEG disc Electrodes.

   Read as Para 4.2.1 :- EEG Cable(with extra one cable) with connections and 5 sets of gold plated EEG disc Electrodes **(Set of 40 electrods).**

Item sl. no. 18
EMG/EP Machine for Electrophysiology Lab

1. **Existing Para 3.1 :-** 1) Minimum 4 channel **upgradable to 6 or 8** system with optical isolation with Ethernet connection for connecting to either to desktop system or laptop system for portable use.

   Read as Para 3.1 :- 1) Minimum 4 channel system with optical isolation with **Ethernet /USB** connection for connecting to either to desktop system or laptop system for portable use.

2. **Existing Para 3.1**. 8) EMG replay of minimum 300 sec of stored data from hard disk with audio and store in AVI format for review on any Windows Media Player PC.

   Read as Para 3.1 :- 8) EMG replay of minimum 300 sec of stored data from hard disk with audio and store in AVI format **or equivalent** for review on any Windows PC.

3. **Existing Para 3. 24)** The electrical stimulator should have controls for stimulus delivery, intensity, store, reverse polarity button and two programmable buttons **preferred by user**.

   Read as Para 3. 24) The electrical stimulator should have controls for stimulus delivery, intensity, store and reverse polarity button.

4. **Existing Para 3. 25)** The base unit of the system should provide all the controls for performing the test,switching to other test protocols and review of the test with control knobs for sensitivity,gain, marking cursors, pulse width etc. with In-built comprehensive nerve/muscle directory.

   Read as Para 3. 25) The **base unit/control panel** of the system should provide all the controls for performing the test, switching to other test protocols and review of the test with control knobs for sensitivity, gain, marking cursors, pulse width etc. with In-built comprehensive nerve/muscle directory.

5. **Existing Para 3. 26)** Automatic report generation in MS word format and **grammatically frame the sentences** and print in the report.

   Read as Para 3. 26) Automatic report generation in MS word format and print in the report

6. **Existing Para 4.2:-** The system should include:
   Branded PC with at least 21"TFT/LCD monitor
   DVD-RW combo drive, laser printer, with latest WINDOWS operating system
   Trolley from principal
   Complete set of electrodes - 100, disposable EMG needles 50, Single fibre stimulator 01.
   Amplifier and up to 4 electrical stimulators (2 adult & 2 pediatric)
   AEP click stimulator with headphones,
   VEP stimulator 19"monitor

   Read as Para 4.2:- The system should include:
   Branded PC with at least 21" TFT/LCD monitor,
   DVD-RW combo drive, laser printer, with latest WINDOWS operating system
   Trolley from principal
   Complete set of electrodes - 100, disposable EMG needles 150 Nos (3- different sizes), single fibre Needle- 01, single fibre **needle electrode**
   2 Electrical stimulator provision for collision studies and should be supplied with reusable bar electrode for electrical stimulation (2 Adult and 2 pediatrics)
   AEP click stimulator with headphones

Item sl. no. 19

Endoscope & Colonoscope

1. **Existing Para :-** Compatible 180 – 300 Watts Xenon Light Source with 2 extra Xenon bulbs.

   Read as Para :- Compatible **100 – 300 Watts Xenon** Light Source with 2 extra Xenon bulbs.

Item sl. no. 20

ECG MACHINE (12 LEAD)

1. **Existing Para** 2 **:-** Lead length selection 3,6&9 sec.

   Read as Para 2 :- Deleted.

2. **Existing Para** 3 **:-** Recording for 12 channels (3 leads and one user selectable any lead as Rhythm lead).

   Read as Para 3:- Recording for 12 channels (3x4+1)

3. **Existing Para** 7 **:-** Complete digital filters, avoids baseline drft, AC (ON/Off) and EMG **(25Hz/35Hz/off)**interface , low pass filter**(150 Hz/100 Hz/75 Hz)**, DFT Filter.

   Read as Para 7:- Complete digital filters, avoids baseline drft, AC (ON/Off) and EMG filter, low pass filter, DFT Filter.

4. **Existing Para 10:-** Auto updating of patient - ID with PC connectivity and export to external device.

   Read as Para 10:- Deleted.

5. **Existing Para 16:-** Alarm information for lead off, lack of paper, Hi & low alarm, ECG signal overload and low battery capacity**.**

   Read as Para 16:- Alarm information for lead off, **lack of paper/end of paper,** ECG signal overload and low battery capacity.

Added Para:- Trolley must be supplied with each ECG machine

Item sl. no. 21
Radiofrequency Ablation System for Treatment of Varicose Veins

1. **Existing Para:- 3.3.1** Flexible catheters of diameter approx.2mm.(Minimum 10 RFA catheters)

   Read as Para:- Flexible catheters of diameter approx.2mm.(Minimum 10 RFA catheters, **8 for veins+2 for Perforators**)

2. **Existing Para:- 3.2.2** Vein wall should be given controlled heating between 0 – 120 degree using catheter like device.

   Read as Para:- 3.2.2 Vein wall should be given controlled heating between **80 – 120 degree** using catheter like device.

Added Para :- Should have a display for quick viewing of treatment and impedance parameters.

Item sl. no. 22

Endo-Bronchial Ultrasound System (EBUS) with Endoscope Reprocessor unit

1. **Existing Para:-** 1.1 Field of view At least 100º (at least 45º forward oblique)

   Read as Para:- 1.1 Field of view At least **80º (at least 35º** forward oblique)

2. **Existing Para:-** 1.12 Scan Angle 75º

   Read as Para:- 1.12 Scan Angle **50º or more**

3. **Existing Para:-** 5.3 Omni directional M-mode, B-mode and Doppler mode

   Read as Para:-Deleted.

4. **Existing Para:- 5.11 Waterproof remote control**

   Read as Para:-Deleted.

Item sl. no. 23

COLOUR DOPPLER ECHOCARDIOGRAPHY SYSTEM WITH ADVANCED 2D FACILITY

1. **Existing Para:- 2.1** Latest generation Electronic Phased array Colour Doppler system with Minimum 30000 Electronic independent channels. System should be DICOM ready and capable of being interfaced with HIS/RIS/ PACS.

   Read as Para:-2.1 Latest generation Electronic Phased array Colour Doppler system with **Minimum 23000 Electronic independent channels**. System should be DICOM ready and capable of being interfaced with HIS/RIS/ PACS.

2. **Existing Para:- 3.3** Adult Trans thoracic Cardiac (02 probes), TEE (Adult TEE — 01 each) and Vascular Probes to be supplied which should be latest generation wide band transducers.

   Read as Para:- 3.3 Adult Trans thoracic Cardiac (02 probes), TEE (Adult TEE — 01 each), **Vascular Probes-01**

3. **Existing Para:-3.4 b)** Quantification of harmonics imaging

   Read as Para:- 3.4 b) Quantification of harmonics imaging **(Optional)**.

4. **Existing Para:-3.20 Minimum** 4.8 GB optical disc drive for image storage and retrieval. (Standard with system)

   Read as Para:- Deleted

5. **Existing Para:-** 3.22 Tissue movement colorization with quantification possibility for IHD/CAD/Heart Failure patients**.**

   Read as Para:- Tissue **Doppler Imaging with** quantification possibility for IHD / CAD Heart Failure patients.

6. **Existing Para:-** 3.26 Facility of Real time perfusion studies.

   Read as Para:- Deleted

7. **Existing Para:-** 4.3 Adult Cardiac probe Electronics Phased Array probe, - 01

   Read as Para:- 4.3 Adult Cardiac probe Electronics Phased Array probe, - **02**

8. **Existing Para:-** 7.1 Should be US - FDA or European CE approved product.

   Read as Para:- 7.1 Should be **US - FDA and European CE** approved product.

Item sl. no. 24
Portable Colour Doppler Echocardiography System

1. **Existing Para:-** 15. The system should have an easy to use control panel, which can be raised up and down and also be rotated for use in operation theaters. Should have an alphanumeric keyboard with illuminated keys and status display.

   Read as Para:- The system should have an easy to use control panel, Should have an alphanumeric keyboard with keys and status display.

2. **Existing Para:-** 17. The system should be able to support at least three Transducers.

   Read as Para:- 17. The system should be able to support at **least two or more** Transducers.

3. **Existing Para:-** 21. Archive-should have inbuilt CDRW, MO drive and 3 ½" Floppy disc with the facility to transfer images.

   Read as Para:-Deleted.

Item sl. no. 25
Bronchoscopy Simulator

1. **Existing Para:-** Fluoroscopic view.

   Read as Para:-Deleted.

2. **Existing Para:-** Customizable case parameters.

   Read as Para:-Deleted.

Item sl. no. 26
High End Colour Doppler

1. **Existing Para:-** 7. The system should have a high dynamic range more than 180 dB.

   Read as Para:- 7. The system should have a high dynamic range more than **200 or more dB.**

2. **Existing Para:-** 29. The system should have support real time acquisition and display of two image planes simultaneously with color by incorporating electronic/mechanical volume Transducer for this function.

   Read as Para:- Deleted

3. **Existing Para:- 31** B. Broad band linear array probe with frequency range 7-17 MHz. or better.

   Read as Para:- 31.B. Broad band linear array probe with frequency range **7-15 MHz. or better.**

Added Para- The system should have fusion capability should be available.

Item sl. no. 27
Holter Monitor with Four Recorders

1. **Existing Para:-A. 8** It should have internal memory for **99** full disclosure readings.

   Read as Para:- A. 8 It should have internal memory for full disclosure readings.

2. **Existing Para:-A. 13** Recorder should have 1000s/sec/channel digital sampling rate for standard recording and internal storage.

   Read as Para:- A. 13 Recorder should have **800s/sec/channel or more** digital sampling rate for standard recording and internal storage.

Added Para- Suitable table for installation of the holter monitor to be supplied.

Item sl. no. 28
Cerebral Function Monitor

1. **Existing Para:-** Should display one channel EEG in real time with adjustable speed and amplitude.

   Read as Para:- should **display 1, 2 or 3 Channel EEG** in Real time with adjustable speed and amplitude.

2. **Existing Para:-** Should use 3 electrodes to measure single channel amplitude EEG.

   Read as Para:- should use 3 electrode **/ 5 electrode to measure single channel /** 3 channel amplitude EEG.

3. **Existing Para:-** Should have inbuilt printer to print traces & other patient information.

   Read as Para:- Should have **inbuilt/ External** printer to print traces & other patient information.

4. **Existing Para:-** Monitor should be supplied complete with Cart, Thermal Paper, Electrode needles 100 nos.

   Read as Para:- Monitor should be supplied complete with Cart, **Thermal Paper / A4 Size Paper**, Electrode Needle 100 nos.

Item sl. no. 32
Operating Microscope (Imported)

1. **Existing Para:-** 5. Preferably with Motorized Zoom, X-Y movement and centering.

   Read as Para:- 5. Equipment must have motorised X-Y **coupling and centering. The change in magnification/zoom may be manual or motorised.**

2. **Existing Para:-** 7. Spare bulbs (12 Nos.)

   Read as Para:- 7. Spare bulbs (12 Nos. **Halogen)**

Item sl. no. 33
Pleura Video Scope

1. **Added Para: - The scope should be compatible with existing system in department.**

Item sl. no. 34
Endoscopy Teaching Models/Simulator for endoscopy teaching Lab

1. **Existing Para:-** Thoracic Ultrasound.

   Read as Para:- Deleted .

Item sl. no. 35
Carbon Dioxide Ultrapulse Laser (Fractional CO2 Laser)

1. **Existing Para:-** Power 60 watt.

   Read as Para:- IT should be **40 watts to 60 watts.**

2. **Existing Para:-** Time range 1 ms to 1 sec

   Read as Para:- Time range **1ms to 5 sec.**

3. **Existing Para:-** Scan area upto 10 mm x 10 mm.

   Read as Para:- Scan area should be **10mm X 10mm oR 15mmX 15mm.**

Item sl. no. 36
Diode Laser for Permanent Hair Reduction

1. **Existing Para:-** Spectrum 800 nm.

   Read as Para:- Spectrum **800 -810 nm.**

2. **Existing Para:-** Repetition rate 2 Hz.

   Read as Para:- Repetition rate **up to 10 Hz**

All other contents of the tender enquiry including terms & conditions remain unaltered.

Note: Prospective Bidders are also advised to check the website regularly prior to the closing date and time of submission of bids.