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| C:\Users\BMSICL\Desktop\bmsicl_logo.jpg | **Bihar Medical Services & Infrastructure Corporation Limited, 4th floor, Bihar State Building Construction Corporation Limited. Hospital Road, Shastri Nagar, Patna 800023, Phone/Fax: +91612 2283287,+ 91612 2283288** |
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**Corrigendum-III**

Bihar Medical Services and Infrastructure Corporation Limited (BMSICL) had invited E-Bids from the interested parties for the procurement, rate contract and the supply of Medical equipment vide Tender No.-BMSICL/2022-23/ME-296. . During and after Pre-bid meeting various suggestions were received from different prospective bidders regarding amendment in technical specification of equipment which were discussed and deliberated on by the experts. On the basis of their recommendations certain amendments in the technical specification of the equipment have been made which are annexed as **Annexure-I** of this corrigendum. Rest of the terms and conditions of the NIT shall remain unchanged. In order to facilitate maximum participation of bidders tender schedule is being revised as following:-

|  |  |
| --- | --- |
| Tender Reference No.  | **BMSICL/2022-23/ME-296** |
| Date and time for downloading of bid document  | **Up to 26th December 2022 till 17:00 Hrs.**  |
| Last date and time of submission of online bids | **27th December 2022 till 17:00 Hrs.**  |
| Last date and time of submission of original documents of EMD, Tender Fee and Document. | **28th December 2022 till 14:00 Hrs.**  |
| Date, Time and Place of opening of Technical Bid | **28th December 2022 (at 15:00 Hrs.) on the website of** [**www.eproc.bihar.gov.in**](http://www.eproc.bihar.gov.in/)**in the office of BMSICL**  |
| Date and time of opening of financial Bids  | **To be announced later on www.eproc.bihar.gov.in**  |

 **SD/-**

 **GM (Procurement)**

 **BMSICL**

**Annexure-I**

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| **Name of Equipment: - C-Arm Machine** |
| **Sl.no.** | **Technical Specification as per tender** | **Proposed Amendment** |
|   | Specification of High Frequency Mobile C-ARM IITV System  | Specification of High Frequency Mobile C-ARM with Flat Panel Detector |
|   | The system should have the below mentioned specifications:  | NO Change |
| **1** | **I.I.T.V. SYSTEM:**  | Flat Panel Detector - Receptor Type: Amorphous Silicon technology Conversion Screen: CsI FPD with 20cm x 20cm or higher Image Matrix 1K x 1K Pixel pitch 210 µm or less ADC conversion 14 bit or better |
|  | a) The image intensifier should be of latest series  |
|  | b) It should be of 9 inches triple field i.e. 9 inches / 6 inches / 4.5 inches  |
|  | c) The center resolution should be minimum 48 lp/cm.  |
|  | d) The circular grid should be fixed on the Image Intensifier (I.I.) to improve image quality.  |
| **2** | **C-ARM STAND:**  |  |
|   |  a) It should be ruggedly built and should be of good design  | NO Change |
|   |  b) It should have 01 (one) or more separate steering for controlling back and front wheel movements  | NO Change |
|   |  c) It should also have the below mentioned movements.  | NO Change |
|   | - Horizontal travel should be minimum 210 mm  | NO Change |
|   | - Orbital movement should be 115°  | NO Change |
|   | - Panning movement should be ± 12.5°  | NO Change |
|   | - Focus to I.I distance should be 900 mm  | Focus to FPD distance should be 900 mm |
|   | - Vertical movement should motorized of 400 mm  | NO Change |
|   | - Focus to I.I Clearance should be 730 mm  | Focus to FPD Clearance should be 730 mm |
|   | - C-Arm rotation should be ±180º (Preferably ±360º)  | NO Change |
| **3** |  **CCD CAMERA:**  | Flat Panel Detector System |
|  | a) The CCD camera should be 1 K x 1K at least ½ inch should be of internationally reputed make  | NO Change |
|  | b) CCD camera must be image capture resolution minimum of 1Kx1K (1024x1024)  | NO Change |
| **4** | **MONITORS:**  |  |
|  | a) Monitor should be used with high resolution (1kx1k) used for medical graded image purposes at least 17 or more  | Monitor should be used with high resolution (1kx1k), used for medical grade images, at least 17'' or more size |
|  | b) The monitor trolley should be provided for mounting 2 monitors and should have 2 shelf for keeping memory and stabilizer.  | NO Change |
| **5** | **GENERATOR**:  |  |
|   | a) It should be microprocessor controlled digital system with display.  | NO Change |
|   | b) Frequency of 40 KHZ or more | NO Change |
|   | c) The fluoroscopic mA should be from 0.3 to 3.0 mA or wider.  | NO Change |
|   | d) The system should have fluoroscopy mode like  | NO Change |
|   | (i) Manual fluoro mode  | NO Change |
|   | (ii) The pulse/frame rate instead of pulse time 1 sec to 10 sec. | NO Change |
|   | (iii) Auto Dose Rate Control in fluoroscopy mode by which either mA & KV should be set automatically as per the thickness of the organ.  | NO Change |
|   | (iv) Manual KV selection during fluoroscopy also should be available.  | NO Change |
|   | (v) Boost fluoroscopy mode (optional) / High Definition Fluoroscopy  | NO Change |
|   | e) The digital fluoroscopic timer should be incorporated with arrangement of auto cut off of exposure after 300 secs.  | NO Change |
|   | f) The radiographic mAs range should be from 20 to 100 mAs or more  | The radiographic mAs range should be from 01 to 25 mAs or more  |
|   | g) The X-ray tube should be dual focus stationary anode. The focal spot of the tube should be 1.5mm x 0.6mm and 1.5mm x 0.6 mm. It should have mono block / tube housing heat storage capacity of 200 KHU or more. It should also have inherent filtration of 0.7mm or more Al eq.  | NO Change |
|   | h) The system should have backlit LCD display of fluoro mA, KV, timer & radiography mAs should be provided.  | NO Change |
|   | i) The reversal, image rotation, functions should be opera table either from control panel or with a remote control.  | NO Change |
|   | j) Memory function like save/ recall should be operated from memory panel & with wireless remote  | NO Change |
|   | k) There should be independent selection of mA and KV & mAs.  | NO Change |
|   | l) The control should have indicator for power, Overload, X-Ray & Tube heating  | NO Change |
|   | m) The system should be upgradable to latest functions  | NO Change |
| **6** | **IMAGE MEMORY:**  |  |
|   | a) The unit should be capable of digital subtraction angiography (DSA) with Road map facility b) The systems should have more then 50000 image storage capacity permanently.  | NO Change |
|   | b) It should have image integration function to reduce the image noise  | NO Change |
|   | c) Should be capable of copying images to Pen Drive through in-built USB port.  | NO Change |
|   | **ESSENTIAL ACCESSORIES:**  |  |
|   | a) Detachable cassette holder for taking X-rays on 8 inches x 10 inches or 10 inches x 12 inches film 50 | Deleted |
|   | b) Lead aprons, Thyroid Shield, Lead Goggles (12 nos each)  | NO Change |
|   | c) Servo stabilizer -1 (compatible with the whole unit for the voltage range of 150 Volt-260 Volt)  | NO Change |
| **7** | The Generator, Tube, Image Intensifier of the equipment should have BIS / US FDA / CE certification.  | Machine should have US FDA / CE (Issued by notified body)/BIS approved |
| **8** | Should be AERB approved. | NO Change |
| **800 mA X-Ray with Flat Panel Detector** |
| **Name of Equipment:-800 mA X-Ray with IITV** | **Name of Equipment after amendment:-800 mA X-Ray with Flat Panel Detector** |
| **Sl.no.** | **Technical Specification as per tender** | **Proposed Amendment** |
|   | **A.    The system should comprise of:** |   No Change |
| 1 | 80 KW high frequency generator | No Change |
| 2 | Remote controlled R/F Table | No Change |
| 3 | 12” Image Intensifier DUAL OR HIGHER FIELD | FPD should have -Receptor type: Amorphous SiliconScintillator: Cesium iodide (CsI)Size of detector: 43 x 43cm or moreImage matrix size: 3K x 3K or moreA/D conversion: 16bitsPixel size:140µm or less.Detector resolution should be more than 3.3 lp/mm. DQE: 65% or more at 0 lp/mm |
| 4 | Multi Leaf collimator with auto collimation from Remote table | No Change |
| 5 | Vertical Bucky Unit | No Change |
| 6 | High capacity X-ray tube and tube assembly. | No Change |
| 7 | All controls (Table, Collimator & IITV) from remote console. |  All controls of RF Table should be from console room as well as from examination room. |
|   | **B.     X-Ray Generator** |   |
| 1 | 80 KW or more microprocessor-controlled generator with high frequency inverter technology | No Change |
| 2 | Maximum output: 80 kW (800ma @100 kV) | No Change |
| 3 | Radiographic kV range: 40 -150 kV at 1 kV step | No Change |
| 4 | Radiographic mA range :50-800 Ma | No Change |
| 5 | Radiographic mAs range: 0.5-800 mAs | No Change |
| 6 | Anatomical program memory –user programmable – 50 programs or more | No Change |
| 7 | LCD/LED readout for exposure parameter display. |  Digital Display of Radiography kV & mAs and Fluoro kV & mA and Cine kV & mA Spot kV and mAs. Integrated touch panel TFT display for various X-Ray function and indications. |
| 8 | Microprocessor controlled with automatic exposure control | No Change |
| 9 | Automatic setting of optimal digital radiography parameters from fluoroscopy parameters (kV, mAs) | No Change |
| 10 | Pulsed fluoroscopy should be possible | No Change |
| 11 | Safety timer for fluoro cut off should be available. | No Change |
|   | **C.    R/F Tables** |  |
| 1 | Remote controlled operation of table movement | No Change |
| 2 | Table tilt: + 90 ~ - 15 deg. or more | ●Motorized Tilt: Vertical +90º to -20º or more Trendelenburg.●Table has automatic stop at Horizontal & Vertical position during tilt movement●Motorized Transverse movement of tabletop: 20cm or more●Table with height adjustment facility●Motorized Longitudinal movements of imaging unit i.e Tube column – detector movement: 100cm or more.●Tube Oblique movement●Integrated bucky for flat panel detector for general radiography and fluoroscopy.●Remotely operated compression device.●Foot switch for releasing fluoroscopy and acquisition.Patient weight carrying capacity: 200 kg.●01No. Suitable grid.●Table side controls for controlling the table movements●Intercom system to communicate with the patients. Table accessories: 1No. Each Handgrip, compression band, footrest. |
| 3 | Lateral movement of table top : Not less than 22 cm |
| 4 | Table should be motorized type for easy patient access Longitudinal movement : Not less than 750 mm. Movement of imaging unit is preferred for patient safety |
| 5 | Total Table Elevation for easy patient transfer |
| 6 | Imaging plate CR Cassette/ Film size : 8 x10 in ~ 14X17 in. |
| 7 | Exposure programs : Up to 4 on 1 should be possible on Cassette Spot Film |
| 8 | 3 on 1 for 14 by 17 and 12 by 10 should be possible |
| 9 | Rapid spot filming should be possible |
| 10 | Automatic Cassette Spot filming should be possible |
| 11 | X-Ray Grid: 12:1, 60 lines/cm |
| 12 | Flat table top with step-less adjustment of foot-rest |
| 13 | Foot rest Adjustable hand grip, Shoulder rest and Binder should be provided |
| 14 | Foot switch for examinations at the patient bed side |
| 15 | Remote console with integrated Table control and Monitor mount |
| 16 | Table side controls for controlling the table movements |
| 17 | Automatic Spot Film Device with cassette up to 14 “ by 17” should be possible |
| 18 | X-ray tube 180 degree swing out should be provided for chest X ray. | No Change |
| 19 | Same Tube should be able to take Chest X-Rays | No Change |
|   | **D.    Image Intensifier & Camera should be located under the couch/R/F/ Table.** | FPD should have - |
| 1 | Input field: 12” Dual or more field | No Change |
| 2 | Resolution: Not less than 45 lp/cm | Receptor type: Amorphous SiliconScintillator: Cesium iodide (CsI)Size of detector: 43 x 43cm or moreImage matrix size: 3K x 3K or moreA/D conversion: 16bitsPixel size:140µm or less.Detector resolution should be more than 3.3 lp/mm.DQE:65% or more at 0 lp/mm |
| 3 | Contrast ratio: Not less than 30:1 | No Change |
| 4 | CCD camera 400 K or more with Last Image hold | No Change |
| 5 | 19” or more Monochrome LCD Medical Grade Monitors- 2 nos | 27” or more Medical Grade Monitors- 2 nos |
| 6 | Trolley for mounting monitor | No Change |
|   | **E.     X-ray Tube** |   |
| 1 | High Speed Rotating anode tube of 9000 rpm or better | No Change |
| 2 | Anode heat capacity - 400 kHU | No Change |
| 3 | Focal spot size –Small focus –not more than 0.6mm | No Change |
|   | Large focus – not more than 1.2mm | No Change |
| 4 | Short term rating – 36 kW/80kW | No Change |
|   | **F.     Vertical Bucky Stand ( Single X-Ray Tube)** |   |
| 1 | Fully counterbalanced Bucky stand for cassettes size up to 14”x17” with high ratio grid min 10:1 or more | No Change |
| 2 | It should have lock for up-down movement | No Change |
| 3 | It should be possible to take chest x-ray without grid. | No Change |
|   | **G.    Digital Image Management system** |   |
|   | System must be supplied with Digital Image Processing Workstation with following Features | No Change |
| 1 | DICOM Image Storage system with 19” monitor |  DICOM Image Storage system with 27” monitor |
| 2 | DICOM print capability in different formats | No Change |
| 3 | CD/DVD writer to Store Images on CD for giving it to patients in PC formats. | No Change |
| 4 | Image Sharpening (Real-time or Stored Images) | No Change |
| 5 | Dynamic contrast control (Gray Level Stretch with WW & WL) | No Change |
| 6 | Cine/Fluro Loop of 500 frames - (Multiple Cine/Fluro Loops to be stored). | Exposure Mode----       RF (For Fluoro, Cine and Spot) DX (For Radiography) |
| 7 | Variably frame Rate up to 25 frames per second for cine Loop | Image Size/ Frame RateRF:●1024×1024 (1K×1K Image resolution)●Up-to 15 FPS Pulsed X-RayDX:●3072×3072 (3K×3K Image resolution)Up-to 2 FPS Pulsed X-Ray |
| 8 | ON Screen Measurements | No Change |
| 9 | Area of Interest Marker | No Change |
| 10 | Text annotations and provision of removal of all text from the image | No Change |
| 11 | Frame by Frame review | No Change |
| 12 | Frame by Frame review | No Change |
|   | **H.    Accessories** |  |
| 1 | Lead Glass viewing window 100 cm x120 cm | No Change |
| 2 | Suitable Capacity Voltage Stabilizer (Servo Controlled) for entire 800 mA X-ray with IITV to be provided |  Suitable Capacity Voltage Stabilizer (Servo Controlled) for entire 800 mA X-ray with FPD to be provided |
| 3 | Three light weight lead aprons. | No Change |
|   | Two thyroid shields, | No Change |
|   | Two gonadal shields | No Change |
|   | **J.** Complete installation of the X-Ray 800mA with IITV machine including, cable ducting, earthing, lead lining on the doors, and all other works required for the installation of the X-Ray 800mA with IITV machine need to be done by the supplier. |  Complete installation of the X-Ray 800mA with FPD machine including, cable ducting, earthing, lead lining on the doors, and all other works required for the installation of the X-Ray 800mA with FPD machine need to be done by the supplier. |
|   | **K.** Post installation QA (Quality assurance) test should be done. | QA test of machine as per AERB guidelines will be responsibility of supplier during warranty & during CMC, Cost is added in CMC cost of the Machine. |
|   | **L.** European CE (Issued by a Notified Body) & AERB Type approval model Should be offered. | The System Should have US FDA/European CE (Issued by a notified body) and AERB approval for the whole system on the date of closing of tender. Any other certification from any regulatory authority will be the responsibility of the supplier. |

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| **Name of Equipment:-X-Ray 600 mA** |  |  |
| **Sl.no.** | **Technical Specification as per tender** | **Proposed Amendment** |
|   | **A high-frequency radiography system** **for various radiographic** **examinations** | No Change |
| **1** | **High frequency generator:** |  |
|   | a. Microprocessor controlled high frequency x-ray generator should be of latest technology with constant output with low ripple frequency. | No Change |
|   | b. Output not less than 50 kW. | No Change |
|   | c. kV range 40 kV - 125 KV, In 1KV increments. | No Change |
|   | d. Output of 600 or more mA at 100 kV. | Output of 600 or more mA at 80 kV. |
|   | e. It should have automatic exposure control (AEC) device. | No Change |
|   | f. It should have high speed starter. | No Change |
|   | g. It should have digital display of kVP and mAs. | No Change |
|   | h. Anatomical programming radiography should be possible. | No Change |
| **2** | **X-ray tube:** |  |
|   | a. Floor mount column stand for x-ray tube with facility of:-Floor Mounted tube stand with 10ft. Long tracks and 98" (249cm) of longitudinal travel. Multi-function, fingertip controls.  | No Change |
|   |  Trunnion rings provides a tilt king of the movement to the tube to allow some lateral cross examinations to the transverse tube.  | No Change |
|   | Auto-stop sensor for horizontal/ vertical adjustments. | No Change |
|   | FAIL -SAFE electromagnetic braking system. Column Rotation (+/-90degree), Transverse (10" travel).  | No Change |
|   | Vertical Travel of 60.5" (154cm) with minimum floor to focus distance of 13.75" (35cm) Tube Angulations of +/-135" with detents 0 degree,+/-90"  | No Change |
|   | b. The x-ray tube should be rotating anode high speed and must have dual focus. | No Change |
|   | c. Focal spots of the following sizes: Large Focus: 1.2 mm or less. | No Change |
|   | d. Please mention tube loading for small focus and large focus, should be at least 30 kW for small focus and at least 50 kW for large focus. | Tube load for small focus and large focus, should be at least 30 kW for small focus and at least 50 kW for large focus |
|   | e. Anode heat storage capacity should be at least 300 kHU or more. Mention heat dissipation rate. | Anode heat storage capacity should be at least 300 kHU or more. |
|   | f. Tube protection against overload. | No Change |
|   | g. A high speed rotor accelerator (starter) is preferable. | No Change |
|   | h. Tube rotation + \_90 degree | No Change |
|   | i. Should have provision of electromagnetic locks with collision protection sensors.  | No Change |
|   | j. Field size programming should be possible. Multileaf collimator having halogen lamp/bright light source, with auto shut off provision of the light, should be available. | Multileaf collimator having halogen lamp/bright light source, with auto shut off provision of the light, should be available. |
| **3** | **Radiographic table (horizontal Bucky table):** |  |
|   | a. Compact floor mounted Bucky table with adjustable height (motorized) and floating top. | No Change |
|   | b. Carbon fiber or equivalent table top table with low attenuation and scratch resistant surface. | No Change |
|   | c. Table must be of following minimum dimensions: Length 2160 mm or more, width 600 mm or more and height 900 mm or more. | No Change |
|   | d. Table should support patient weight of 200 kg. or more. | No Change |
|   | e. Foot switches for adjusting height. | No Change |
|   | f. Grid movement facility should be available. Should have a grid ratio of 12:1 or more. | Grid movement facility should be available. Should have a grid ratio of 10:1 or more. |
|   | g. Automatic exposure control should be available. | Delete |
|   | h. Anti-collision and safety devices should be present. | Delete |
| **4** | **Vertical Bucky:** |  |
|   | Chest Stand-Good quality, wall mounted, fixed chest stand, vertical movement up to 6 feet. | No Change |
| **5** | **Accessories:** |  |
|   | a. Suitable rating, Voltage stabilizer servo controlled should be supplied. | No Change |
|   | b. Lead lining for doors. | No Change |
|   | c. 05. Mm lead equalent, radiation protection aprons of good quality-(two).  | c. 0.35 lead equalent, radiation protection aprons of good quality-(two) |
|   | d. Two thyroid shields. | No Change |
|   | e. One stand for radiation protection aprons. | No Change |
|   | f. Lead screen (with lead glass window) | No Change |
|   | g. Patient fixing belts and compression device (for performing excretory urography, etc.) | No Change |
| **6** | **Approvals:** |  |
|   | a. The system should have US FDA/European CE (Issued by a notified body) and AERB approval for the whole system on the date of closing of tender. Any other certification from any regulatory authority will be the responsibility of the supplier. | No Change |
|   | b. QA test of the machine as per AERB guidelines will be responsibility of supplier during warranty & during CMC, cost is added in CMC cost of the machine.  | No Change |
| **Name of Equipment: -300 mA X-Ray** |
| **Sl.no.** | **Technical Specification as per tender** | **Proposed Amendment** |
|  | **Commercial**  | No Change |
|  | Delivery: 45 days | No Change |
|  | **(c).  Compressive Annual Maintenance Contract (CMC):** | No Change |
|  | (i)       The Purchaser desires to have a comprehensive maintenance contract also for a period of 7 years after the expiry of the warranty period, clearly indicating year-wise comprehensive maintenance charges, which shall be added to the bid price at a discount rate of 8% per annum. Bids without charge will be considered non-responsive. This CMC shall form an integral part of the main contract (accordingly Award of contract has to be issued). Withdrawal or non-compliance of agreed terms and conditions after the execution of the contract will lead to invoking of penal provisions and may also lead to blacklisting of the successful bidder for a period of three years and forfeiture of Security deposit.  | No Change |
|  | (ii)     Any major repair pointed out by the Purchaser shall be rectified by the Supplier from the date of intimation within a period of 3 calendar days and commission the equipment to the satisfaction of the Purchaser, failing which the purchaser has write to levy a penalty on the Supplier a sum of Rs.2,500/- per day or part thereof for each equipment until the equipment are repaired and commission to the satisfaction of the Purchaser. Failure to repair may also lead to forfeit of Security deposit. | No Change |
| **1** | **X-Ray Generator:**  |   |
|  | A.  High frequency X-Ray generator | No Change |
|  | B. Inverter frequency – 20 KHz or more | No Change |
|  | C. Output power 30KW or more. | No Change |
|  | D.  KV Range – 40 to 125KVp | No Change |
|  | E. mA range- up to 300 mA or more | No Change |
|  | F. 3300mA @ 80 KV or better | 300mA @ 80 KV or better |
|  | G. mAs range – 2 to 200 mAs or more | No Change |
| **2** | **X-Ray tube:**  |  |
|  | A. Rotating anode | No Change |
|  | B.  Focal spot :- small - 1.2 x 1.2 mm & Large - 2 x 2 mm | No Change |
|  | C. One pair of High-tension cable (at least 8 meters) | No Change |
|  | D. collimator with full field illumination and angle indicator | No Change |
| **3** | **Table:**  |  |
|  | A. The table should be horizontal floating type. | No Change |
|  | B. Bucky table with floating table top with immense flexibility and ease in positioning. | No Change |
|  | C.  Table top positioning with release of electromagnetic brakes controlled with a foot operated lever. | No Change |
|  | D. Table Height – 75 cm (±5%) | No Change |
|  | E.     Table top – 218 x 80 cm (±10%) | No Change |
|  | F.      Table top should be made up of low radiation absorption, water proof material, stain free | No Change |
|  | G.    Longitudinal Travel: ± 40 cm (±2%) | No Change |
|  | H.    Transverse Travel : ± 12.5 cm (±2%) | No Change |
|  | I.      Electromagnetic locking of the table movement | No Change |
| **4** | **Motorized Bucky:**  |  |
|  | A.    Grid 10:1, 60 lines / cm, focused at 115 cm | No Change |
|  | B.     65 cm travel; movement arrested by electromagnetic brakes | No Change |
|  | C.     Suitable for cassettes in cm and inch formats and should be capable to accommodate 14”x17” | No Change |
| **5** |  **X-Ray Ceiling column**  | No Change |
|  | A.    Travel range: 195 cm (±10%); movement arrested with electromagnetic brakes | No Change |
|  | B.     Vertical travel: 135 cm (±10%); movement arrested with electromagnetic brakes | No Change |
|  | C.     Column rotation: 360°; from + 180° to -180° in 90° increments | No Change |
|  | D.    X-ray tube rotation: ± 180°; locks at 0° / +90° / -90° | No Change |
|  | **Additional Point** | Delete |
| **6** | **STANDARD ACCESSORIES**  |   |
|  | 1. Three-fold X-ray protection barrier – 1no.
 | No Change |
|  | B.     Lead apron 0.5mm lead equivalence with thyroid guard – 2 no. | Lead apron 0.35mm lead equivalence with thyroid guard – 2 no. |
|  | C.     Radiography cassettes with high speed screen (reputed make)-pl mention make, separate for each cassette to be mentioned ,14 x 17 – 3 nos, 12x10 – 3 nos, 10x8 – 3 nos. | Delete |
|  | D.    Should be supplied with chest stand and cone for skull x-rays. | No Change |
| **7** | **POWER SUPPLY REQUIREMENTS** |   |
|  | A.    380 to 440Vac, Three phase, 50/60 Hz. | No Change |
| **8** |  **SPECIFICATION OF LEAD APRON.**  |  |
|  | A.    Should be AERB approved. | No Change |
|  | B.     Should be light weight 0.5mm lead equivalent. | Should be light weight 0.35mm lead equivalent. |
|  | C.     Should be hook and loop type (Velcro). | No Change |
|  | D.    Should be supplied along with thyroid guard. | No Change |
| **9** | **SPECIFICATION FOR THREE-FOLD LEAD PROTECTIVE BARRIER.**  |   |
|  | A.    Should be a threefold mobile lead protective barrier. | No Change |
|  | B.     Should be a mounted on heavy duty casters. | No Change |
|  | C.     Should have a viewing window of 1.5 mm thick lead equivalence. | No Change |
|  | D.    The center part should have 3 feet width and 6 feet height. The sides should be 1.5 feet width and 6 feet height | No Change |
|  | **US FDA / European CE /BIS & AERB Approved model should be offered.** | a.US FDA / European CE (Issued by notified body)/BIS Approved model b. AERB Approved model  |
| **11** |  **Supplier is responsible to comply AERB guideline for installation. Lead of Patient entry door, Exposure Lamp & Radiation singe is responsibility of supplier** | No Change |
| **12** | **QA test of the machine as per AERB guidelines will be responsibility of supplier during warranty & during CMC, cost is added in CMC cost of the machine.**  | No Change |
|  | **Additional Point** | Added (Point No- 13) -Suitable Servo controlled Voltage Stabilizer |